SUZUKI

SV1000/S

SUPPLEMENTARY SERVICE MANUAL

USE THIS MANUAL WITH:
SV1000S/SV1000 SERVICE MANUAL (99500-39251-01E)

99501-39560-01E

SV1000K5/SK5

FOREWORD

This manual describes service data, service specifications and servicing procedures which differ from those of the SV1000K4/SK4 ('04-model).

NOTE:
** Any differences between the SV1000K4/SK4 ('04-model) and SV1000K5/SK5 ('05-model) in specifications and service data are indicated with an asterisk mark (*).*
** Please refer to the SV1000K4/SK4 Service Manual for details which are not given in this manual.*

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SUZUKI MOTOR CORPORATION

COUNTRY AND AREA CODES

The following codes stand for the applicable country (-ies) and area (-s).

CODE	COUNTRY or AREA	EFFECTIVE FRAME NO.
E-02	U.K.	SV1000K5 : JS1BX431200100001 – SV1000SK5 : JS1BX412200100001 –
E-03 E-28 E-33	U.S.A. (Except for California) Canada California (U.S.A.)	SV1000K5/SV1000SK5 : JS1VT54A 52100001 –
E-19	E.U.	SV1000K5 : JS1BX431100100001 – SV1000U2K5 : JS1BX521100100001 – SV1000SK5 : JS1BX412100100001 – SV1000S2K5 : JS1BX612100100001 –
E-24	Australia	SV1000K5 : JS1BX441300100001 – SV1000SK5 : JS1BX442300100001 –

SPECIFICATIONS (SV1000K5)

DIMENSIONS AND DRY MASS

Overall length		2 080 mm (81.9 in)
Overall width		785 mm (30.9 in)
Overall height		1 080 mm (42.5 in)
Wheelbase		1 445 mm (56.9 in)
Ground clearance		150 mm (5.9 in)
Seat height		800 mm (31.5 in)
Dry mass		187 kg (412 lbs) E-33
		186 kg (410 lbs) ..... Others

ENGINE

Type		4-stroke, Liquid-cooled, DOHC, 90° degree V-twin
Number of cylinders		2
Bore		98.0 mm (3.858 in)
Stroke		66.0 mm (2.598 in)
Displacement		996 cm^3 (60.8 cu. in)
Compression ratio	*	11.6 : 1
Fuel system		Fuel injection
Air cleaner		Non-woven fabric element
Starter system		Electric
Lubrication system		Wet sump
Idle speed		1 200 ± 100 r/min

DRIVE TRAIN

Clutch		Wet multi-plate type
Transmission		6-speed constant mesh
Gearshift pattern		1-down, 5-up
Primary reduction ratio		1.838 (57/31)
Gear ratios, Low		2.666 (32/12)
2nd		1.933 (29/15)
3rd		1.500 (27/18)
4th		1.227 (27/22)
5th		1.086 (25/23)
Top		1.000 (24/24)
Final reduction ratio		2.352 (40/17)
Drive chain		RK50SMOZ1, 110 links

CHASSIS

Front suspension		Telescopic, coil spring, oil damped
Rear suspension		Link type, coil spring, oil damped
Front suspension stroke		120 mm (4.7 in)
Rear wheel travel		130 mm (5.1 in)
Caster		24.8°
Trail		107 mm (4.2 in)
Steering angle		32° (right & left)
Turning radius		3.0 m (9.84 ft)
Front brake		Disc brake, twin
Rear brake		Disc brake
Front tire size		120/70ZR17M/C (58W), tubeless
Rear tire size		180/55ZR17M/C (73W), tubeless

ELECTRICAL

Ignition type		Electronic ignition (Transistorized)
Ignition timing		5° B.T.D.C. at 1 200 r/min
Spark plug		NGK CR8EK or DENSO U24ETR
Battery		12 V 43.2 kC (12 Ah)/10 HR
Generator		Three-phase A.C. generator
Main fuse		30 A
Fuse		10/10/10/15/10/15 A
Headlight		12 V 60/55 W
Position light		12 V 5 W E-02, 19
License plate light		12 V 5 W
Turn signal light		12 V 21 W
Brake light/Tail light		LED
Speedometer light		LED
Tachometer light		LED
Fuel level indicator light		LED
Turn signal indicator light		LED
Neutral indicator light		LED
High beam indicator light		LED
Oil pressure/Coolant temperature/Fuel injection warning light		LED

CAPACITIES

Fuel tank		16 L (4.2/3.5 US/Imp gal)	E-33
		17 L (4.5/3.7 US/Imp gal)	Others
Engine oil,	oil change	2 700 ml (2.9/2.4 US/Imp qt)	
	with filter change	2 900 ml (3.1/2.6 US/Imp qt)	
	overhaul	3 300 ml (3.5/2.9 US/Imp qt)	
Coolant		2.2 L (2.3/1.9 US/Imp qt)	

These specifications are subject to change without notice.

SPECIFICATIONS (SV1000SK5)

DIMENSIONS AND DRY MASS

Overall length		2 085 mm (82.1 in)
Overall width		745 mm (29.3 in)
Overall height		1 170 mm (46.1 in)
Wheelbase		1 430 mm (56.3 in)
Ground clearance		150 mm (5.9 in)
Seat height		800 mm (31.5 in)
Dry mass	*	187 kg (412 lbs) E-33
	*	186 kg (410 lbs) ..... Others

ENGINE

Type		4-stroke, Liquid-cooled, DOHC, 90° degree V-twin
Number of cylinders		2
Bore		98.0 mm (3.858 in)
Stroke		66.0 mm (2.598 in)
Displacement		996 cm^3 (60.8 cu. in)
Compression ratio	*	11.6 : 1
Fuel system		Fuel injection
Air cleaner		Non-woven fabric element
Starter system		Electric
Lubrication system		Wet sump
Idle speed		1 200 ± 100 r/min

DRIVE TRAIN

Clutch		Wet multi-plate type
Transmission		6-speed constant mesh
Gearshift pattern		1-down, 5-up
Primary reduction ratio		1.838 (57/31)
Gear ratios, Low		2.666 (32/12)
2nd		1.933 (29/15)
3rd		1.500 (27/18)
4th		1.227 (27/22)
5th		1.086 (25/23)
Top		1.000 (24/24)
Final reduction ratio		2.352 (40/17)
Drive chain		RK50SMOZ1, 108 links

CHASSIS

Front suspension	Telescopic, coil spring, oil damped
Rear suspension	Link type, coil spring, oil damped
Front suspension stroke	115 mm (4.5 in)
Rear wheel travel	130 mm (5.1 in)
Caster	24.5°
Trail	98 mm (3.9 in)
Steering angle	30° (right & left)
Turning radius	3.2 m (10.50 ft)
Front brake	Disc brake, twin
Rear brake	Disc brake
Front tire size	120/70ZR17M/C (58W), tubeless
Rear tire size	180/55ZR17M/C (73W), tubeless

ELECTRICAL

Ignition type	Electronic ignition (Transistorized)
Ignition timing	5° B.T.D.C. at 1 200 r/min
Spark plug	NGK CR8EK or DENSO U24ETR
Battery	12 V 43.2 kC (12 Ah)/10 HR
Generator	Three-phase A.C. generator
Main fuse	30 A
Fuse	15/15/10/15/15/10 A
Headlight	12 V 60/55 W × 2 (H4)
Position light	12 V 5 W × 2
License plate light	12 V 5 W
Turn signal light	12 V 21 W
Brake light/Tail light	LED
Speedometer light	LED
Tachometer light	LED
Fuel level indicator light	LED
Turn signal indicator light	LED
Neutral indicator light	LED
High beam indicator light	LED
Oil pressure/Coolant temperature/Fuel injection warning light	LED

CAPACITIES

Fuel tank		16 L (4.2/3.5 US/Imp gal)	E-33
		17 L (4.5/3.7 US/Imp gal)	Others
Engine oil,	oil change	2 700 ml (2.9/2.4 US/Imp qt)	
	with filter change	2 900 ml (3.1/2.6 US/Imp qt)	
	overhaul	3 300 ml (3.5/2.9 US/Imp qt)	
Coolant		2.2 L (2.3/1.9 US/Imp qt)	

These specifications are subject to change without notice.

SERVICE DATA (SV1000K5)

VALVE + GUIDE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	36 (1.42)	—
	EX.	33 (1.30)	—
Tappet clearance (when cold)	IN.	0.10 – 0.20 (0.004 – 0.008)	—
	EX.	0.20 – 0.30 (0.008 – 0.012)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.046 (0.0004 – 0.0018)	—
	EX.	0.030 – 0.066 (0.0012 – 0.0026)	—
Valve guide I.D.	IN. & EX.	5.500 – 5.512 (0.2165 – 0.2170)	—
Valve stem O.D.	IN.	5.475 – 5.490 (0.2156 – 0.2161)	—
	EX.	5.455 – 5.470 (0.2148 – 0.2154)	—
Valve stem deflection	IN. & EX.	—	0.35 (0.014)
Valve stem runout	IN. & EX.	—	0.05 (0.002)
Valve head thickness	IN. & EX.	—	0.5 (0.02)
Valve seat width	IN. & EX.	0.9 – 1.1 (0.035 – 0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length	IN. & EX.	—	41.2 (1.62)
Valve spring tension	IN. & EX.	197 – 227 N (20.1 – 23.1 kgf, 44.3 – 51.0 lbs) at length 35.6 mm (1.40 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN.	37.78 – 37.82 (1.487 – 1.489)	37.48 (1.476)
	EX.	* 37.18 – 37.22 (1.464 – 1.465)	* 36.88 (1.452)
Camshaft journal oil clearance	IN. & EX.	0.019 – 0.053 (0.0007 – 0.0021)	0.150 (0.0059)
Camshaft journal holder I.D.	IN. & EX.	22.012 – 22.025 (0.8666 – 0.8671)	—
Camshaft journal O.D.	IN. & EX.	21.972 – 21.993 (0.8650 – 0.8659)	—

ITEM	STANDARD		LIMIT
Camshaft runout	IN. & EX.	—	0.10 (0.004)
Cam drive idle gear/sprocket thrust clearance	0.15 – 0.29 (0.006 – 0.011)		—
Cylinder head distortion	—		0.05 (0.002)

CYLINDER + PISTON + PISTON RING

Unit: mm (in)

ITEM	STANDARD		LIMIT
Compression pressure (Automatic de-comp. actuated)	* 1 050 – 1 450 kPa (10.5 – 14.5 kgf/cm², 149 – 206 psi)		* 850 kPa (8.5 kgf/cm², 121 psi)
Compression pressure difference	—		200 kPa (2 kgf/cm², 28 psi)
Piston to cylinder clearance	0.015 – 0.025 (0.0006 – 0.0010)		0.12 (0.0047)
Cylinder bore	98.000 – 98.015 (3.8583 – 3.8589)		Nicks or Scratches
Piston diam.	97.980 – 97.995 (3.8575 – 3.8581) Measure at 10 mm (0.4 in) from the skirt end.		97.880 (3.8535)
Cylinder distortion	—		0.05 (0.002)
Piston ring free end gap	1st	Approx. 8.8 (0.35)	7.0 (0.28)
	2nd	Approx. 10.1 (0.40)	8.1 (0.32)
Piston ring end gap	1st	0.15 – 0.35 (0.006 – 0.014)	0.7 (0.03)
	2nd	0.30 – 0.45 (0.012 – 0.018)	0.7 (0.03)
Piston ring to groove clearance	1st	—	0.18 (0.0071)
	2nd	—	0.15 (0.0059)
Piston ring groove width	1st	0.93 – 0.95 (0.0366 – 0.0374)	—
		1.55 – 1.57 (0.0610 – 0.0618)	—
	2nd	1.01 – 1.03 (0.0398 – 0.0406)	—
	Oil	2.51 – 2.53 (0.0988 – 0.0996)	—
Piston ring thickness	1st	0.86 – 0.91 (0.034 – 0.036)	—
		1.38 – 1.40 (0.054 – 0.055)	—
	2nd	0.97 – 0.99 (0.038 – 0.039)	—
Piston pin bore I.D.	22.002 – 22.008 (0.8662 – 0.8665)		22.030 (0.8673)
Piston pin O.D.	21.993 – 22.000 (0.8658 – 0.8661)		21.980 (0.8654)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	22.010 – 22.018 (0.8665 – 0.8668)	22.040 (0.8677)
Conrod big end side clearance	0.17 – 0.32 (0.007 – 0.013)	0.50 (0.020)
Conrod big end width	21.95 – 22.00 (0.864 – 0.866)	—
Crank pin width	44.17 – 44.22 (1.739 – 1.741)	—
Conrod big end oil clearance	0.040 – 0.064 (0.0016 – 0.0025)	0.080 (0.0031)
Crank pin O.D.	44.976 – 45.000 (1.7707 – 1.7717)	—
Crankshaft journal oil clearance	* – 0.004 – 0.023 (– 0.0002 – 0.0009)	0.080 (0.0031)
Crankshaft journal O.D.	47.985 – 48.000 (1.8892 – 1.8898)	—
Crankshaft runout	—	0.05 (0.002)

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pressure (at 60 °C, 140 °F)	Above 350 kPa (3.5 kgf/cm², 50 psi) Below 650 kPa (6.5 kgf/cm², 92 psi) at 3 000 r/min	—

CLUTCH

Unit: mm (in)

ITEM		STANDARD	LIMIT
Drive plate thickness	No. 1	2.92 – 3.08 (0.115 – 0.121)	2.62 (0.103)
	No. 2 and 3	3.72 – 3.88 (0.146 – 0.153)	3.42 (0.135)
Drive plate claw width	No. 1	13.85 – 13.96 (0.545 – 0.550)	13.05 (0.514)
	No. 2 and 3	13.90 – 14.00 (0.547 – 0.551)	13.10 (0.516)
Driven plate distortion		—	0.10 (0.004)
Clutch spring free length		28.1 (1.11)	26.7 (1.05)
Clutch master cylinder bore		14.000 – 14.043 (0.5512 – 0.5528)	—
Clutch master cylinder piston diam.		13.957 – 13.984 (0.5495 – 0.5505)	—
Clutch release cylinder bore		35.700 – 35.762 (1.4055 – 1.4079)	—
Clutch release cylinder piston diam.		35.650 – 35.675 (1.4035 – 1.4045)	—
Clutch fluid type		DOT 4	—

THERMOSTAT + RADIATOR + FAN + COOLANT

ITEM	STANDARD		LIMIT
Thermostat valve opening temperature	86.5 – 89.5 °C (188 – 193 °F)		—
Thermostat valve lift	Over 8.0 mm (0.31 in) at 100 °C (212 °F)		—
Radiator cap valve opening pressure	110 kPa (1.1 kgf/cm^2, 15.6 psi)		—
Cooling fan thermo-switch operating temperature	OFF →ON	Approx. 105 °C (221 °F)	—
	ON →OFF	Approx. 100 °C (212 °F)	—
Engine coolant temperature sensor resistance	20 °C (68 °F)	Approx. 2.45 kΩ	—
	40 °C (104 °F)	Approx. 1.15 kΩ	—
	60 °C (140 °F)	Approx. 0.58 kΩ	—
	80 °C (176 °F)	Approx. 0.32 kΩ	—
Engine coolant type	Use an anti-freeze/coolant compatible with aluminum radiator, mixed with distilled water only, at the ratio of 50:50.		—
Engine coolant	Reservoir tank side	Approx. 250 ml (0.3/0.2 US/Imp qt)	—
	Engine side	Approx. 1 950 ml (2.1/1.7 US/Imp qt)	—

DRIVE TRAIN

Unit: mm (in) Expect ratio

ITEM		STANDARD	LIMIT
Primary reduction ratio		1.838 (57/31)	—
Final reduction ratio		2.352 (40/17)	—
Gear ratio	Low	2.666 (32/12)	—
	2nd	1.933 (29/15)	—
	3rd	1.500 (27/18)	—
	4th	1.227 (27/22)	—
	5th	1.086 (25/23)	—
	Top	1.000 (24/24)	—
Shift fork to groove clearance		0.1 – 0.3 (0.004 – 0.012)	0.50 (0.020)
Shift fork groove width		5.0 – 5.1 (0.197 – 0.201)	—
Shift fork thickness		4.8 – 4.9 (0.189 – 0.193)	—
Drive chain	Type	RK50SMOZ1	—
	Links	110 links, ENDLESS	—
	20-link length	—	319.4 (12.6)
Drive chain slack		20 – 30 (0.8 – 1.2)	—
Gearshift lever height		55 – 65 (2.2 – 2.6)	—

INJECTOR + FUEL PUMP + FUEL PRESSURE REGURATOR

ITEM	SPECIFICATION	NOTE
Injector resistance	11 – 13 Ω at 20 °C (68 °F)	
Fuel pump discharge amount	168 ml and more (5.7/5.9 US/Imp oz) for 10 seconds at 300 kPa (3.0 kgf/cm^2, 43 psi)	
Fuel pressure regulator operating set pressure	Approx. 300 kPa (3.0 kgf/cm^2, 43 psi)	

FI-SENSORS

ITEM	SPECIFICATION		NOTE
CKP sensor resistance	130 – 240 Ω		
CKP sensor peak voltage	5.0 V and more (When cranking)		
IAP sensor input voltage (F & R)	4.5 – 5.5 V		
IAP sensor output voltage (F & R)	Approx. 2.5 V at idle speed		
TP sensor input voltage	4.5 – 5.5 V		
TP sensor resistance	Closed	Approx. 1.12 kΩ	
	Opened	Approx. 4.26 kΩ	
TP sensor output voltage	Closed	Approx. 1.12 V	
	Opened	Approx. 4.26 V	
ECT sensor input voltage	4.5 – 5.5 V		
ECT sensor resistance	Approx. 2.45 kΩ at 20 °C (68 °F)		
IAT sensor input voltage	4.5 – 5.5 V		
IAT sensor resistance	Approx 2.45 kΩ at 20 °C (68 °F)		
TO sensor resistance	19.1 – 19.7 kΩ		
TO sensor voltage	1.4 V and less		
GP switch voltage	0.6 V and more (From 1st to top)		
Injector voltage	Battery voltage		
Ignition coil primary peak voltage	200 V and more (When cranking)		
STP sensor input voltage	4.5 – 5.5 V		
STP sensor resistance	Closed	Approx. 0.58 kΩ	
	Opened	Approx. 4.38 kΩ	
STP sensor output voltage	Closed	Approx. 0.58 V at input voltage is 5.0 V	
	Opened	Approx. 4.38 V at input voltage is 5.0 V	
STV actuator resistance	7 – 14 Ω		
Heated oxygen sensor output voltage	0.4 V and less at idle speed		E-02, 19
	0.6 V and more at 3 000 r/min		E-02, 19
Heated oxygen sensor resistance	4 – 5 Ω at 23 °C (73.4 °F)		E-02, 19
PAIR solenoid valve resistance	20 – 24 Ω at 20 °C (68 °F)		

THROTTLE BODY

ITEM	SPECIFICATION
I.D. No.	* 16G4 (For E-33), 16G3 (Others)
Bore size	* 54 mm
Fast idle r/min	1 900 – 2 500 r/min at 25 °C (77 °F)
Idle r/min	1 200 ± 100 r/min/Warmed engine
Throttle cable play	2.0 – 4.0 mm (0.08 – 0.16 in)

ELECTRICAL

Unit: mm (in)

ITEM			SPECIFICATION		NOTE
Firing order			1·2		
Spark plug			Type	NGK: CR8EK DENSO: U24ETR	
			Gap	0.6 – 0.7 (0.024 – 0.028)	
Spark performance			Over 8 (0.3) at 1 atm.		
Crankshaft position sensor resistance			130 – 240 Ω		Bl – G
Ignition coil resistance			Primary	2.8 – 4.2 Ω	⊕ tap – ⊖ tap
			Secondary	24 – 36 kΩ	⊕ tap – Plug cap
Crankshaft position sensor peak voltage			5.0 V and more		When cranking
Ignition coil primary peak voltage			200 V and more		When cranking
Generator coil resistance			0.2 – 0.7 Ω		Y – Y
Generator Max. output			Approx. 400 W at 5 000 r/min		
Generator no-load voltage (When engine is cold)			75 V and more (AC) at 5 000 r/min		
Regulated voltage			14.0 – 15.5 V at 5 000 r/min		
Starter relay resistance			3 – 6 Ω		
Battery	Type designation		FTX14-BS		
	Capacity		12 V 43.2 kC (12 Ah)/10 HR		
Fuse size	Headlight	HI	10 A		
		LO	10 A		
	Fuel		10 A		
	Ignition		15 A		
	Turn signal		10 A		
	Fan motor		15 A		
	Main		30 A		

WATTAGE

Unit: W

ITEM		SPECIFICATION
Headlight	HI	60
	LO	55
Position light (For E-02, 19)		5
Brake light/Taillight		LED
Turn signal light		21 × 4
Speedometer/Tachometer light		LED
Turn signal indicator light		LED
High beam indicator light		LED
Neutral indicator light		LED
Fuel indicator light		LED
Coolant temperature/Oil pressure/ FI indicator light		LED
License light		5

BRAKE + WHEEL

Unit: mm (in)

ITEM		STANDARD		LIMIT
Rear brake pedal height			55 – 65 (2.17 – 2.56)	—
Brake disc thickness		Front	5.0 ± 0.2 (0.197 ± 0.008)	4.5 (0.18)
		Rear	5.0 ± 0.2 (0.197 ± 0.008)	4.5 (0.18)
Brake disc runout (Front & Rear)			—	0.30 (0.012)
Master cylinder bore		Front	15.870 – 15.913 (0.6248 – 0.6265)	—
		Rear	14.000 – 14.043 (0.5512 – 0.5529)	—
Master cylinder piston diam.		Front	15.827 – 15.854 (0.6231 – 0.6242)	—
		Rear	13.957 – 13.984 (0.5495 – 0.5506)	—
Brake caliper cylinder bore	Leading	Front	30.230 – 30.280 (1.1902 – 1.1921)	—
	Trailing		33.960 – 34.010 (1.3370 – 1.3389)	—
		Rear	38.180 – 38.230 (1.5031 – 1.5051)	—
Brake caliper piston diam.	Leading	Front	30.167 – 30.200 (1.1876 – 1.1890)	—
	Trailing		33.901 – 33.934 (1.3346 – 1.3360)	—
		Rear	38.115 – 38.148 (1.5005 – 1.5019)	—
Brake fluid type			DOT 4	—

ITEM	STANDARD		LIMIT
Wheel rim runout (Front & Rear)	Axial	—	2.0 (0.08)
	Radial	—	2.0 (0.08)
Wheel axle runout	Front	—	0.25 (0.010)
	Rear	—	0.25 (0.010)
Wheel rim size	Front	17M/C × MT 3.50	—
	Rear	17M/C × MT 5.50	—
Tire size	Front	120/70 ZR17M/C (58W), tubeless	—
	Rear	180/55 ZR17M/C (73W), tubeless	—
Tire type	Front	MICHELIN: PILOT ROAD B	—
	Rear	MICHELIN: PILOT ROAD B	—
Tire tread depth	Front	—	1.6 (0.06)
	Rear	—	2.0 (0.08)

SUSPENSION

Unit: mm (in)

ITEM	STANDARD		LIMIT
Front fork stroke	120 (4.7)		—
Front fork spring free length	305 (12.0)		298 (11.7)
Front fork oil level (without spring, inner tube fully compressed)	147 (5.8)		—
Front fork oil type	SUZUKI FORK OIL L01 or an equivalent fork oil		—
Front fork oil capacity (each leg)	508 ml (17.2/17.9 US/Imp oz)		—
Front fork spring adjuster	7th groove from top		—
Front fork damping force adjuster	Rebound	1 and 1/4 turns out from stiffest position	—
	Compression	1 turn out from stiffest position	—
Rear shock absorber spring pre-set length	202 (8.0)		—
Rear shock absorber damping force adjuster	Rebound	3/4 turn out from stiffest position	—
	Compression	1 and 3/4 turns out from stiffest position	—
Rear wheel travel	130 (5.1)		—
Swingarm pivot shaft runout	—		0.3 (0.01)

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kgf/cm^2	psi	kPa	kgf/cm^2	psi
FRONT	250	2.50	36	250	2.50	36
REAR	250	2.50	36	290	2.90	42

FUEL + OIL

ITEM	SPECIFICATION		NOTE
Fuel type	Use only unleaded gasoline of at least 87 pump octane (R/2 + M/2) or 91 octane or higher rated by the research method. Gasoline containing MTBE (Methyl Tertiary Butyl Ether), less than 10% ethanol, or less than 5% methanol with appropriate cosolvents and corrosion inhibitor is permissible.		E-33
	Gasoline used should be graded 91 octane or higher. An unleaded gasoline is recommended.		The others
Fuel tank	16 L (4.2/3.5 US/Imp gal)		E-33
	17 L (4.5/3.7 US/Imp gal)		The others
Engine oil type	* SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Engine oil capacity	Change	2 700 ml (2.9/2.4 US/Imp qt)	
	Filter change	2 900 ml (3.1/2.6 US/Imp qt)	
	Overhaul	3 300 ml (3.5/2.9 US/Imp qt)	

SERVICE DATA (SV1000SK5)

VALVE + GUIDE

Unit: mm (in)

ITEM	STANDARD		LIMIT
Valve diam.	IN.	36 (1.42)	—
	EX.	33 (1.30)	—
Tappet clearance (when cold)	IN.	0.10 – 0.20 (0.004 – 0.008)	—
	EX.	0.20 – 0.30 (0.008 – 0.012)	—
Valve guide to valve stem clearance	IN.	0.010 – 0.046 (0.0004 – 0.0018)	—
	EX.	0.030 – 0.066 (0.0012 – 0.0026)	—
Valve guide I.D.	IN. & EX.	5.500 – 5.512 (0.2165 – 0.2170)	—
Valve stem O.D.	IN.	5.475 – 5.490 (0.2156 – 0.2161)	—
	EX.	5.455 – 5.470 (0.2148 – 0.2154)	—
Valve stem deflection	IN. & EX.	—	0.35 (0.014)
Valve stem runout	IN. & EX.	—	0.05 (0.002)
Valve head thickness	IN. & EX.	—	0.5 (0.02)
Valve seat width	IN. & EX.	0.9 – 1.1 (0.035 – 0.043)	—
Valve head radial runout	IN. & EX.	—	0.03 (0.001)
Valve spring free length	IN. & EX.	—	41.2 (1.62)
Valve spring tension	IN. & EX.	197 – 227 N (20.1 – 23.1 kgf, 44.3 – 51.0 lbs) at length 35.6 mm (1.40 in)	—

CAMSHAFT + CYLINDER HEAD

Unit: mm (in)

ITEM	STANDARD		LIMIT
Cam height	IN.	37.78 – 37.82 (1.487 – 1.489)	37.48 (1.476)
	EX.	* 37.18 – 37.22 (1.464 – 1.465)	* 36.88 (1.452)
Camshaft journal oil clearance	IN. & EX.	0.019 – 0.053 (0.0007 – 0.0021)	0.150 (0.0059)
Camshaft journal holder I.D.	IN. & EX.	22.012 – 22.025 (0.8666 – 0.8671)	—
Camshaft journal O.D.	IN. & EX.	21.972 – 21.993 (0.8650 – 0.8659)	—

ITEM	STANDARD		LIMIT
Camshaft runout	IN. & EX.	—	0.10 (0.004)
Cam drive idle gear/sprocket thrust clearance	0.15 – 0.29 (0.006 – 0.011)		—
Cylinder head distortion	—		0.05 (0.002)

CYLINDER + PISTON + PISTON RING

Unit: mm (in)

ITEM	STANDARD		LIMIT
Compression pressure (Automatic de-comp. actuated)	* 1 050 – 1 450 kPa (10.5 – 14.5 kgf/cm², 149 – 206 psi)		* 850 kPa (8.5 kgf/cm², 121 psi)
Compression pressure difference	—		200 kPa (2 kgf/cm², 28 psi)
Piston to cylinder clearance	0.015 – 0.025 (0.0006 – 0.0010)		0.12 (0.0047)
Cylinder bore	98.000 – 98.015 (3.8583 – 3.8589)		Nicks or Scratches
Piston diam.	97.980 – 97.995 (3.8575 – 3.8581) Measure at 10 mm (0.4 in) from the skirt end.		97.880 (3.8535)
Cylinder distortion	—		0.05 (0.002)
Piston ring free end gap	1st	Approx. 8.8 (0.35)	7.0 (0.28)
	2nd	Approx. 10.1 (0.40)	8.1 (0.32)
Piston ring end gap	1st	0.15 – 0.35 (0.006 – 0.014)	0.7 (0.03)
	2nd	0.30 – 0.45 (0.012 – 0.018)	0.7 (0.03)
Piston ring to groove clearance	1st	—	0.18 (0.0071)
	2nd	—	0.15 (0.0059)
Piston ring groove width	1st	0.93 – 0.95 (0.0366 – 0.0374)	—
		1.55 – 1.57 (0.0610 – 0.0618)	—
	2nd	1.01 – 1.03 (0.0398 – 0.0406)	—
	Oil	2.51 – 2.53 (0.0988 – 0.0996)	—
Piston ring thickness	1st	0.86 – 0.91 (0.034 – 0.036)	—
		1.38 – 1.40 (0.054 – 0.055)	—
	2nd	0.97 – 0.99 (0.038 – 0.039)	—
Piston pin bore I.D.	22.002 – 22.008 (0.8662 – 0.8665)		22.030 (0.8673)
Piston pin O.D.	21.993 – 22.000 (0.8658 – 0.8661)		21.980 (0.8654)

CONROD + CRANKSHAFT

Unit: mm (in)

ITEM	STANDARD	LIMIT
Conrod small end I.D.	22.010 – 22.018 (0.8665 – 0.8668)	22.040 (0.8677)
Conrod big end side clearance	0.17 – 0.32 (0.007 – 0.013)	0.50 (0.020)
Conrod big end width	21.95 – 22.00 (0.864 – 0.866)	—
Crank pin width	44.17 – 44.22 (1.739 – 1.741)	—
Conrod big end oil clearance	0.040 – 0.064 (0.0016 – 0.0025)	0.080 (0.0031)
Crank pin O.D.	44.976 – 45.000 (1.7707 – 1.7717)	—
Crankshaft journal oil clearance	* – 0.004 – 0.023 (– 0.0002 – 0.0009)	0.080 (0.0031)
Crankshaft journal O.D.	47.985 – 48.000 (1.8892 – 1.8898)	—
Crankshaft runout	—	0.05 (0.002)

OIL PUMP

ITEM	STANDARD	LIMIT
Oil pressure (at 60 °C, 140 °F)	Above 350 kPa (3.5 kgf/cm², 50 psi) Below 650 kPa (6.5 kgf/cm², 92 psi) at 3 000 r/min	—

CLUTCH

Unit: mm (in)

ITEM		STANDARD	LIMIT
Drive plate thickness	No. 1	2.92 – 3.08 (0.115 – 0.121)	2.62 (0.103)
	No. 2 and 3	3.72 – 3.88 (0.146 – 0.153)	3.42 (0.135)
Drive plate claw width	No. 1	13.85 – 13.96 (0.545 – 0.550)	13.05 (0.514)
	No. 2 and 3	13.90 – 14.00 (0.547 – 0.551)	13.10 (0.516)
Driven plate distortion		—	0.10 (0.004)
Clutch spring free length		28.1 (1.11)	26.7 (1.05)
Clutch master cylinder bore		14.000 – 14.043 (0.5512 – 0.5528)	—
Clutch master cylinder piston diam.		13.957 – 13.984 (0.5495 – 0.5505)	—
Clutch release cylinder bore		35.700 – 35.762 (1.4055 – 1.4079)	—
Clutch release cylinder piston diam.		35.650 – 35.675 (1.4035 – 1.4045)	—
Clutch fluid type		DOT 4	—

THERMOSTAT + RADIATOR + FAN + COOLANT

ITEM	STANDARD		LIMIT
Thermostat valve opening temperature	86.5 – 89.5 °C (188 – 193 °F)		—
Thermostat valve lift	Over 8.0 mm (0.31 in) at 100 °C (212 °F)		—
Radiator cap valve opening pressure	110 kPa (1.1 kgf/cm², 15.6 psi)		—
Cooling fan thermo-switch operating temperature	OFF →ON	Approx. 105 °C (221 °F)	—
	ON →OFF	Approx. 100 °C (212 °F)	—
Engine coolant temperature sensor resistance	20 °C (68 °F)	Approx. 2.45 kΩ	—
	40 °C (104 °F)	Approx. 1.15 kΩ	—
	60 °C (140 °F)	Approx. 0.58 kΩ	—
	80 °C (176 °F)	Approx. 0.32 kΩ	—
Engine coolant type	Use an anti-freeze/coolant compatible with aluminum radiator, mixed with distilled water only, at the ratio of 50:50.		—
Engine coolant	Reservoir tank side	Approx. 250 ml (0.3/0.2 US/Imp qt)	—
	Engine side	Approx. 1 950 ml (2.1/1.7 US/Imp qt)	—

DRIVE TRAIN

Unit: mm (in) Expect ratio

ITEM		STANDARD	LIMIT
Primary reduction ratio		1.838 (57/31)	—
Final reduction ratio		2.352 (40/17)	—
Gear ratio	Low	2.666 (32/12)	—
	2nd	1.933 (29/15)	—
	3rd	1.500 (27/18)	—
	4th	1.227 (27/22)	—
	5th	1.086 (25/23)	—
	Top	1.000 (24/24)	—
Shift fork to groove clearance		0.1 – 0.3 (0.004 – 0.012)	0.50 (0.020)
Shift fork groove width		5.0 – 5.1 (0.197 – 0.201)	—
Shift fork thickness		4.8 – 4.9 (0.189 – 0.193)	—
Drive chain	Type	RK50SMOZ1	—
	Links	108 links, ENDLESS	—
	20-link length	—	319.4 (12.6)
Drive chain slack		20 – 30 (0.8 – 1.2)	—
Gearshift lever height		55 – 65 (2.2 – 2.6)	—

INJECTOR + FUEL PUMP + FUEL PRESSURE REGURATOR

ITEM	SPECIFICATION	NOTE
Injector resistance	11 – 13 Ω at 20 °C (68 °F)	
Fuel pump discharge amount	168 ml and more (5.7/5.9 US/lmp oz) for 10 seconds at 300 kPa (3.0 kgf/cm², 43 psi)	
Fuel pressure regulator operating set pressure	Approx. 300 kPa (3.0 kgf/cm², 43 psi)	

FI-SENSORS

ITEM	SPECIFICATION		NOTE
CKP sensor resistance	130 – 240 Ω		
CKP sensor peak voltage	5.0 V and more (When cranking)		
IAP sensor input voltage (F & R)	4.5 – 5.5 V		
IAP sensor output voltage (F & R)	Approx. 2.5 V at idle speed		
TP sensor input voltage	4.5 – 5.5 V		
TP sensor resistance	Closed	Approx. 1.12 kΩ	
	Opened	Approx. 4.26 kΩ	
TP sensor output voltage	Closed	Approx. 1.12 V	
	Opened	Approx. 4.26 V	
ECT sensor input voltage	4.5 – 5.5 V		
ECT sensor resistance	Approx. 2.45 kΩ at 20 °C (68 °F)		
IAT sensor input voltage	4.5 – 5.5 V		
IAT sensor resistance	Approx 2.45 kΩ at 20 °C (68 °F)		
TO sensor resistance	19.1 – 19.7 kΩ		
TO sensor voltage	1.4 V and less		
GP switch voltage	0.6 V and more (From 1st to top)		
Injector voltage	Battery voltage		
Ignition coil primary peak voltage	200 V and more (When cranking)		
STP sensor input voltage	4.5 – 5.5 V		
STP sensor resistance	Closed	Approx. 0.58 kΩ	
	Opened	Approx. 4.38 kΩ	
STP sensor output voltage	Closed	Approx. 0.58 V at input voltage is 5.0 V	
	Opened	Approx. 4.38 V at input voltage is 5.0 V	
STV actuator resistance	7 – 14 Ω		
Heated oxygen sensor output voltage	0.4 V and less at idle speed		E-02, 19
	0.6 V and more at 3 000 r/min		E-02, 19
Heated oxygen sensor resistance	4 – 5 Ω at 23 °C (73.4 °F)		E-02, 19
PAIR solenoid valve resistance	20 – 24 Ω at 20 °C (68 °F)		

THROTTLE BODY

ITEM	SPECIFICATION
I.D. No.	* 16G4 (For E-33), 16G3 (For others)
Bore size	* 54 mm
Fast idle r/min	1 900 – 2 500 r/min at 25 °C (77 °F)
Idle r/min	1 200 ± 100 r/min/Warmed engine
Throttle cable play	2.0 – 4.0 mm (0.08 – 0.16 in)

ELECTRICAL

Unit: mm (in)

ITEM			SPECIFICATION		NOTE
Firing order			1·2		
Spark plug			Type	NGK: CR8EK DENSO: U24ETR	
			Gap	0.6 – 0.7 (0.024 – 0.028)	
Spark performance			Over 8 (0.3) at 1 atm.		
Crankshaft position sensor resistance			130 – 240 Ω		Bl – G
Ignition coil resistance			Primary	2.8 – 4.2 Ω	⊕ tap – ⊖ tap
			Secondary	24 – 36 kΩ	⊕ tap – Plug cap
Crankshaft position sensor peak voltage			5.0 V and more		When cranking
Ignition coil primary peak voltage			200 V and more		When cranking
Generator coil resistance			0.2 – 0.7 Ω		Y – Y
Generator Max. output			Approx. 400 W at 5 000 r/min		
Generator no-load voltage (When engine is cold)			75 V and more (AC) at 5 000 r/min		
Regulated voltage			14.0 – 15.5 V at 5 000 r/min		
Starter relay resistance			3 – 6 Ω		
Battery	Type designation		FTX14-BS		
	Capacity		12 V 43.2 kC (12 Ah)/10 HR		
Fuse size	Headlight	HI	15 A		
		LO	15 A		
	Fuel		10 A		
	Ignition		15 A		
	Turn signal		10 A		
	Fan motor		15 A		
	Main		30 A		

WATTAGE

Unit: W

ITEM		SPECIFICATION
Headlight	HI	60 × 2
	LO	55 × 2
Position light		5 × 2
Brake light/Taillight		LED
Turn signal light		21 × 4
Speedometer/Tachometer light		LED
Turn signal indicator light		LED
High beam indicator light		LED
Neutral indicator light		LED
Fuel indicator light		LED
Coolant temperature/oil pressure/ FI indicator light		LED
License light		5

BRAKE + WHEEL

Unit: mm (in)

ITEM		STANDARD		LIMIT
Rear brake pedal height			55 – 65 (2.17 – 2.56)	—
Brake disc thickness		Front	5.0 ± 0.2 (0.197 ± 0.008)	4.5 (0.18)
		Rear	5.0 ± 0.2 (0.197 ± 0.008)	4.5 (0.18)
Brake disc runout (Front & Rear)			—	0.30 (0.012)
Master cylinder bore		Front	15.870 – 15.913 (0.6248 – 0.6265)	—
		Rear	14.000 – 14.043 (0.5512 – 0.5529)	—
Master cylinder piston diam.		Front	15.827 – 15.854 (0.6231 – 0.6242)	—
		Rear	13.957 – 13.984 (0.5495 – 0.5506)	—
Brake caliper cylinder bore	Leading	Front	30.230 – 30.280 (1.1902 – 1.1921)	—
	Trailing		33.960 – 34.010 (1.3370 – 1.3389)	—
		Rear	38.180 – 38.230 (1.5031 – 1.5051)	—
Brake caliper piston diam.	Leading	Front	30.167 – 30.200 (1.1876 – 1.1890)	—
	Trailing		33.901 – 33.934 (1.3346 – 1.3360)	—
		Rear	38.115 – 38.148 (1.5005 – 1.5019)	—
Brake fluid type			DOT 4	—

ITEM	STANDARD		LIMIT
Wheel rim runout (Front & Rear)	Axial	—	2.0 (0.08)
	Radial	—	2.0 (0.08)
Wheel axle runout	Front	—	0.25 (0.010)
	Rear	—	0.25 (0.010)
Wheel rim size	Front	17 × MT 3.50, 17M/C × MT 3.50	—
	Rear	17 × MT 5.50, 17M/C × MT 5.50	—
Tire size	Front	120/70 ZR17M/C (58W), tubeless	—
	Rear	180/55 ZR17M/C (73W), tubeless	—
Tire type	Front	MICHELIN: PILOT SPORT E	—
	Rear	MICHELIN: PILOT SPORT L	—
Tire tread depth	Front	—	1.6 (0.06)
	Rear	—	2.0 (0.08)

SUSPENSION

Unit: mm (in)

ITEM	STANDARD		LIMIT
Front fork stroke	115 (4.5)		—
Front fork spring free length	* 260.2 (10.24)		* 254 (10.0)
Front fork oil level (without spring, inner tube fully compressed)	* 140 (5.5)		—
Front fork oil type	SUZUKI FORK OIL L01 or an equivalent fork oil		—
Front fork oil capacity (each leg)	* 565 ml (19.1/19.9 US/Imp oz)		—
Front fork spring adjuster	6th groove from top		—
Front fork damping force adjuster	Rebound	* 1 and 1/4 turn out from stiffest position	—
	Compression	1 turn out from stiffest position	—
Rear shock absorber spring pre-set length	199.3 (7.85)		—
Rear shock absorber damping force adjuster	Rebound	3/4 turn out from stiffest position	—
	Compression	2 and 1/4 turns out from stiffest position	—
Rear wheel travel	130 (5.1)		—
Swingarm pivot shaft runout	—		0.3 (0.01)

TIRE PRESSURE

COLD INFLATION TIRE PRESSURE	SOLO RIDING			DUAL RIDING		
	kPa	kgf/cm²	psi	kPa	kgf/cm²	psi
FRONT	250	2.50	36	250	2.50	36
REAR	250	2.50	36	290	2.90	42

FUEL + OIL

ITEM	SPECIFICATION		NOTE
Fuel type	Use only unleaded gasoline of at least 87 pump octane (R/2 + M/2) or 91 octane or higher rated by the research method. Gasoline containing MTBE (Methyl Tertiary Butyl Ether), less than 10% ethanol, or less than 5% methanol with appropriate cosolvents and corrosion inhibitor is permissible.		E-03, 28, 33
	Gasoline used should be graded 91 octane or higher. An unleaded gasoline is recommended.		The others
Fuel tank	16 L (4.2/3.5 US/Imp gal)		E-33
	17 L (4.5/3.7 US/Imp gal)		The others
Engine oil type	* SAE 10W-40, API SF/SG or SH/SJ with JASO MA		
Engine oil capacity	Change	2 700 ml (2.9/2.4 US/Imp qt)	
	Filter change	2 900 ml (3.1/2.6 US/Imp qt)	
	Overhaul	3 300 ml (3.5/2.9 US/Imp qt)	

CRANKCASE-CRANKSHAFT BEARING SELECTION

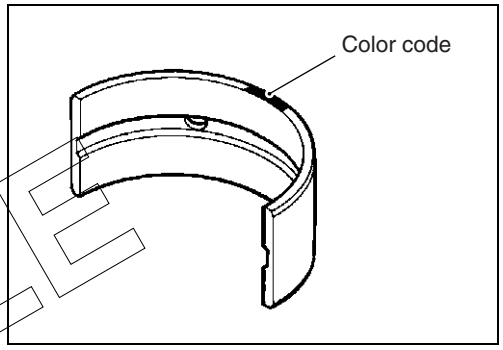
Select the specified bearings from the crankcase bore I.D. code.
The crankcase bore I.D. code Ⓐ "A", "B" or "C", is stamped on the inside of each crankcase half.

Bearing selection table

I.D. code Ⓐ	I.D. specification	Bearing
A	52.000 – 52.006 mm (2.0472 – 2.0475 in)	Green
B	52.006 – 52.012 mm (2.0475 – 2.0477 in)	Black
C	52.012 – 52.018 mm (2.0477 – 2.0479 in)	Brown

Bearing thickness

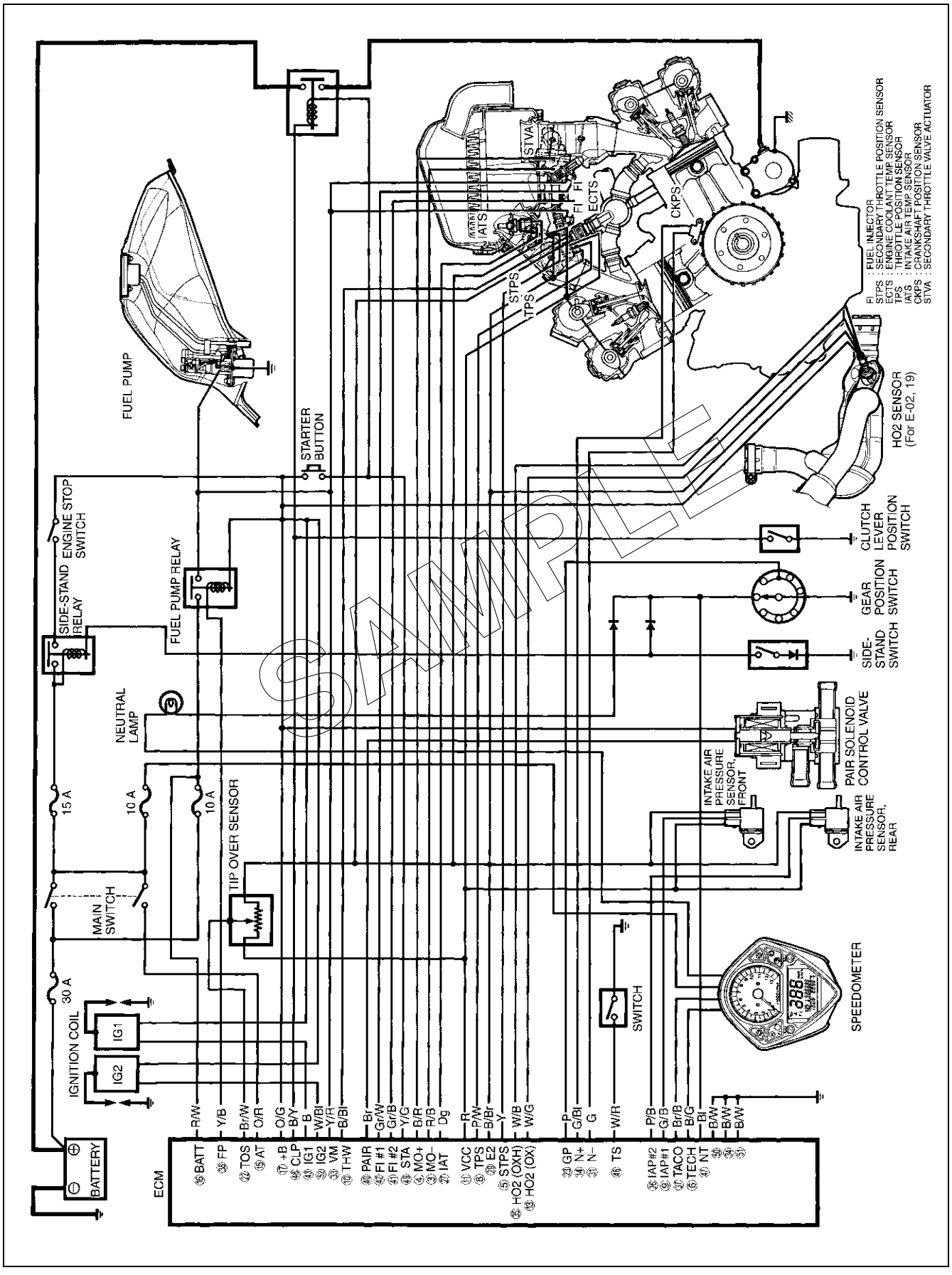
Color (Part No.)	Thickness
Green (12229-16G00-0A0)	1.999 – 2.002 mm (0.0787 – 0.0788 in)
Black (12229-16G00-0B0)	2.002 – 2.005 mm (0.0788 – 0.0789 in)
Brown (12229-16G00-0C0)	2.005 – 2.008 mm (0.0789 – 0.0791 in)



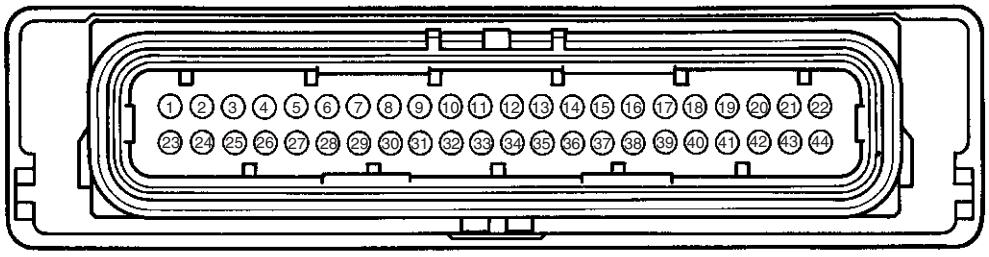
CAUTION

Bearing must be replaced as a set.

FI SYSTEM WIRING DIAGRAM

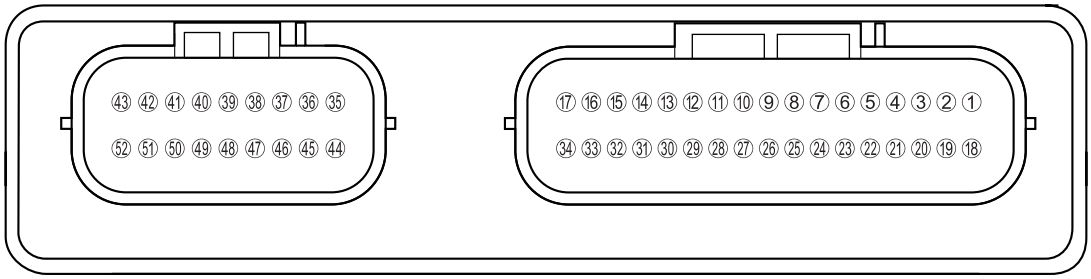


ECM TERMINAL (For K4-Model)



TERMINAL NO.	CIRCUIT	TERMINAL NO.	CIRCUIT
①	Front cylinder ignition coil (IG1)	㉓	HO2 control selector (EXS) For E-02, 19
②	Rear cylinder ignition coil (IG2)	㉔	HO2 sensor signal (HO2S) For E-02, 19
③	Ground (E3)	㉕	—
④	Serial data for tachometer (TACO)	㉖	CKP sensor signal (CKP+)
⑤	Front cylinder fuel injector (#1)	㉗	—
⑥	Rear cylinder fuel injector (#2)	㉘	Power source for fuel injector (VM)
⑦	PAIR control solenoid valve (PAIR)	㉙	—
⑧	HO2 sensor heater (HO2) For E-02, 19	㉚	CKP sensor signal (CKP–)
⑨	Power source for back-up (B+2)	㉛	GP switch signal (GP)
⑩	Power source for sensors (VCC)	㉜	Fuel pump relay (FP Relay)
⑪	—	㉝	Ignition switch signal (AT)
⑫	CMP sensor signal (CMPS)	㉞	Sensor ground (E2)
⑬	ECM ground (E1)	㉟	Ground (E1)
⑭	IAT sensor signal (IAT)	㊱	ECT sensor signal (ECT)
⑮	Power source (B+1)	㊲	Serial data for speedometer (TECH)
⑯	IAP sensor signal (IAPS)	㊳	—
⑰	ATM pressure sensor signal (APS)	㊴	—
⑱	Clutch lever position switch (CLP)	㊵	Neutral switch (NT)
⑲	TP sensor signal (TP)	㊶	TO sensor signal (TOS)
⑳	Actuator motor (+)	㊷	—
㉑	Starter switch (STA)	㊸	—
㉒	Actuator motor (–)	㊹	STP sensor signal (STP)

ECM TERMINAL (For K5-Model)



TERMINAL NO.	CIRCUIT	TERMINAL NO.	CIRCUIT
①	—	⑱	—
②	—	⑲	—
③	Actuator motor (–)	⑳	—
④	Actuator motor (+)	㉑	Blank
⑤	STP sensor signal (STP)	㉒	TO sensor signal (TOS)
⑥	Serial data for speedometer (TECH)	㉓	GP switch signal (GP)
⑦	Blank	㉔	Blank
⑧	TP sensor signal (TP)	㉕	Blank
⑨	IAP sensor signal (Front) (IAPS)	㉖	IAP sensor signal (Rear) (IAPS)
⑩	ECT sensor signal (ECT)	㉗	IAT sensor signal (IAT)
⑪	Power source for sensor (VCC)	㉘	Blank
⑫	HO2 sensor signal (HO2S) For E-02, 19	㉙	Sensor ground (E2)
⑬	Blank	㉚	Blank
⑭	CKP sensor signal (CKP+)	㉛	CKP sensor signal (CKP–)
⑮	Ignition switch signal (AT)	㉜	—
⑯	Power source for back-up (B+2)	㉝	Power source for fuel injector (VM)
⑰	Power source (B+1)	㉞	ECM ground (E1)

TERMINAL NO.	CIRCUIT	TERMINAL NO.	CIRCUIT
㉟	HO2 sensor heater (HO2, H) For E-02, 19	㊹	—
㊱	Blank	㊺	HO2 control selector (EXS) For E-02, 19
㊲	Serial data for tachometer (TACO)	㊻	—
㊳	Fuel pump relay (FP Relay)	㊼	Neutral switch (NT)
㊴	Blank	㊽	Clutch lever position switch (CLP)
㊵	PAIR control solenoid valve (PAIR)	㊾	Starter switch (STA)
㊶	Rear cylinder fuel injector (#2)	㊿	Ground (E3)
㊷	Front cylinder fuel injector (#1)	㊿①	Ground (E1)
㊸	Front cylinder ignition coil (IG1)	㊿②	Rear cylinder ignition coil (IG2)

FAIL-SAFE FUNCTION

FI system is provided with fail-safe function to allow the engine to start and the motorcycle to run in a minimum performance necessary even under malfunction condition.

ITEM	FAIL-SAFE MODE	STARTING ABILITY	RUNNING ABILITY
Intake air pressure sensor (Front & Rear)	Intake air pressure is fixed to 760 mmHg.	"YES"	"YES"
Throttle position sensor	TPS opening value is fixed to full open position.	"YES"	"YES"
Engine coolant temp. sensor	Engine coolant temperature value is fixed to 80 °C.	"YES"	"YES"
Intake air temperature sensor	Intake air temperature value is fixed to 40 °C.	"YES"	"YES"
Ignition signal #1 (IG coil #1)	#1 Ignition-off and #1 Fuel-cut	"YES"	"YES"
		#2 cylinder can run.	
Ignition signal #2 (IG coil #2)	#2 Ignition-off and #2 Fuel-cut	"YES"	"YES"
		#1 cylinder can run.	
Injection signal #1	#1 Fuel-cut	"YES"	"YES"
		#2 cylinder can run.	
Injection signal #2	#2 Fuel-cut	"YES"	"YES"
		#1 cylinder can run.	
HO2 sensor (For E-02, 19)	Feedback compensation is inhibited. (Air/fuel ratio is fixed to normal.)	"YES"	"YES"
Secondary throttle valve actuator	Secondary throttle valve is fixed in any position.	"YES"	"YES"
Secondary throttle position sensor	Secondary throttle valve is fixed in full close position.	"YES"	"YES"
Gear position signal	Gear position signal is fixed to 6th gear.	"YES"	"YES"
PAIR control solenoid valve	O2 feedback control is stopped and PAIR valve is fixed to open position.	"YES"	"YES"

The engine can start and can run even if the above signal is not received from each sensor. But, the engine running condition is not complete, providing only emergency help (by fail-safe circuit). In this case, it is necessary to bring the motorcycle to the workshop for complete repair.

MALFUNCTION CODE AND DEFECTIVE CONDITION

MALFUNCTION CODE	DETECTED ITEM	DETECTED FAILURE CONDITION CHECK FOR
C00	NO FAULT	————
C12	Crankshaft position sensor	The signal does not reach ECM for more than 2 sec. after receiving the starter signal.
		The crankshaft position sensor wiring and mechanical parts (Crankshaft position sensor, wiring/coupler connection)
C13	Intake air pressure sensor (Front)	When incorrect vacuum hose and/or lead wire coupler connection, C13 is indicated. The sensor should produce following voltage. (0.50 V $\leqq$ sensor voltage < 4.85 V) Without the above range, C13 is indicated.
		Intake air pressure sensor, wiring/coupler connection
C14	Throttle position sensor	The sensor should produce following voltage. (0.20 V $\leqq$ sensor voltage < 4.80 V) Without the above range, C14 is indicated.
		Throttle position sensor, wiring/coupler connection
C15	Engine coolant temperature sensor	The sensor voltage should be the following. (0.15 V $\leqq$ sensor voltage < 4.85 V) Without the above range, C15 is indicated.
		Engine coolant temperature sensor, wiring/coupler connection
C17	Intake air pressure sensor (Rear)	When incorrect vacuum hose and/or lead wire coupler connection, C17 is indicated. The sensor should produce following voltage. (0.50 V $\leqq$ sensor voltage < 4.85 V) Without the above range, C17 is indicated.
		Intake air pressure sensor, wiring/coupler connection
C21	Intake air temperature sensor	The sensor voltage should be the following. (0.15 V $\leqq$ sensor voltage < 4.85 V) Without the above range, C21 is indicated.
		Intake air temperature sensor, wiring/coupler connection
C23	Tip over sensor	The sensor voltage should be the following for more than 2 sec. after ignition switch turns ON. (0.20 V $\leqq$ sensor voltage < 4.80 V) Without the above value, C23 is indicated.
		Tip over sensor, wiring/coupler connection
C24 or C25	Ignition signal	Crankshaft position sensor signal is produced and ECM determines the ignition signal but signal from ignition coil is interrupted continuous by 4 times or more. In this case, the code C24 or C25 is indicated.
		Ignition coil, wiring/coupler connection, power supply from the battery

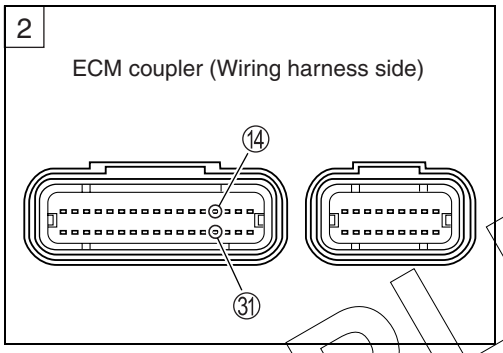
C28	Secondary throttle valve actuator	When no actuator control signal is supplied from the ECM, communication signal does not reatch ECM or operation voltage does not reach STVA motor, C28 is indicated. STVA can not operate.
		STVA lead wire/coupler, STVA
C29	Secondary throttle valve position sensor	The sensor should produce following voltage. (0.10 V $\leqq$ sensor voltage < 4.90 V) Without the above range, C29 is indicated.
		Secondary throttle position sensor, wiring/coupler connection
C31	Gear position signal	Gear position signal voltage should be higher than the following for more than 2 seconds. (Gear position switch voltage $\geqq$ 0.6 V) Without the above value, C31 is indicated.
		Gear position sensor, wiring/coupler connection, gearshift cam, etc.
C32 or C33	Fuel injector	Crankshaft position sensor signal is produced and ECM determines the injection signal but fuel injection signal is interrupted continuous by 4 times or more. In this case, the code C32 or C33 is indicated.
		Injector, wiring/coupler connection, power supply to the injector
C41	Fuel pump relay	No voltage is applied to fuel pump although fuel pump relay is turned ON, or voltage is applied to fuel pump although fuel pump relay is turned OFF.
		Fuel pump relay, connecting lead, power source to fuel pump relay
C42	Ignition switch	Ignition switch signal is not input in the ECM.
		Ignition switch, lead wire/coupler
C44	Heated oxygen sensor (HO2S) [For E-02, 19]	During O2 feedback control, O2 sensor voltage is higher or lower than the specification. No signal is detected during engine operation or no electrical power is supplied from the battery.
		HO2S lead wire/coupler connection Battery voltage supply to the HO2S
C49	PAIR control solenoid valve (PAIR valve)	When no operating voltage is supplied from the ECM, C49 is indicated. PAIR valve can not operate.
		PAIR valve lead wire/coupler

FI SYSTEM TROUBLESHOOTING

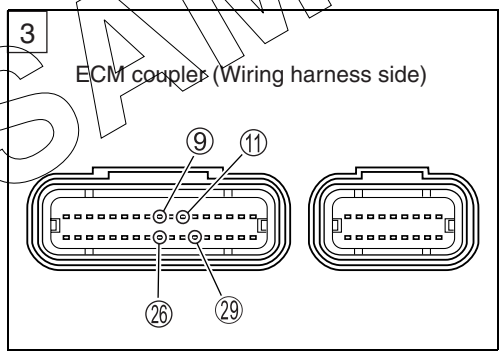
- Due to change from model K5, the connecting section of ECM wiring harness has also been modified as shown in page 28.
- On model K5, the connector terminals to be used for checking sensors for voltage, resistance or continuity at the ECM terminal are located as shown below.

NOTE:
To measure voltage, resistance or continuity of sensors, the terminals on the wiring harness side should be used with the wiring harness coupler pulled free from ECM.

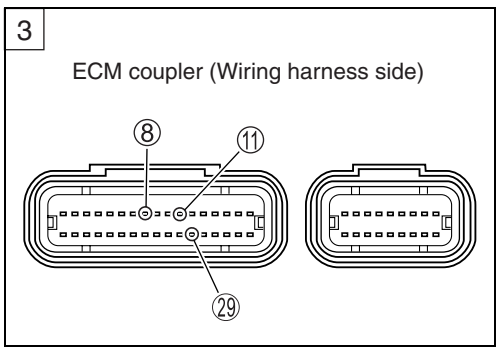
"C12" CKP SENSOR CIRCUIT MALFUNCTION



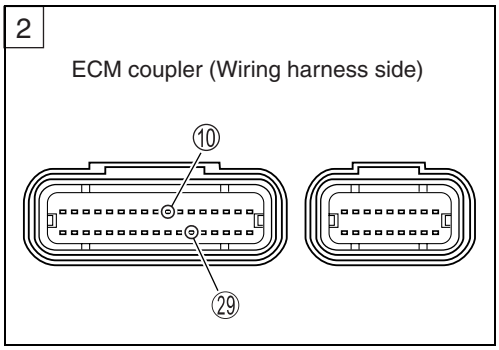
"C13" or "C17" IAP SENSOR CIRCUIT MALFUNCTION



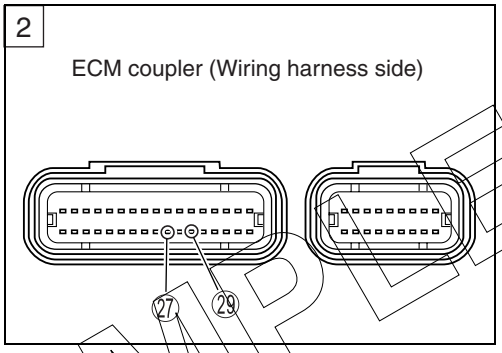
"C14" TP SENSOR CIRCUIT MALFUNCTION



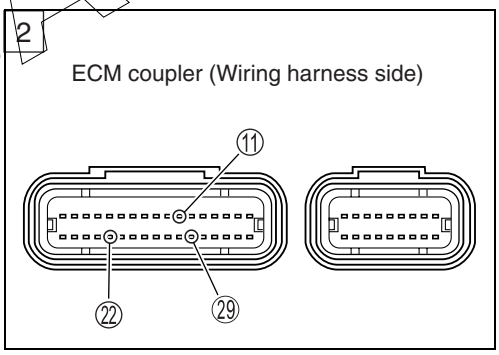
“C15” ECT SENSOR CIRCUIT MALFUNCTION



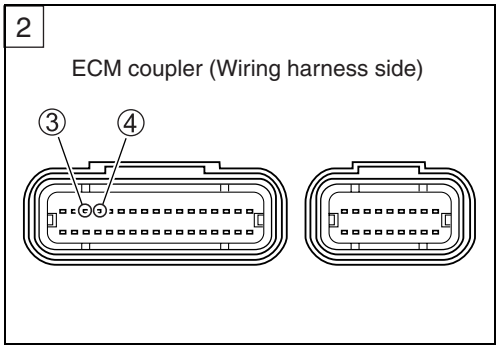
“C21” IAT SENSOR CIRCUIT MALFUNCTION



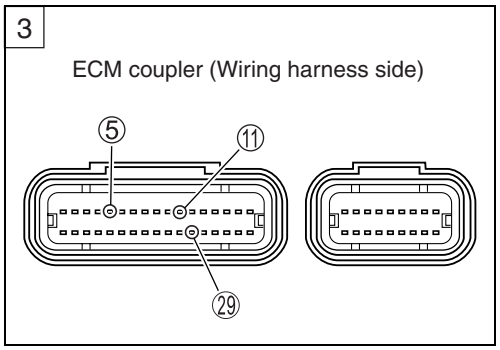
“C23” TO SENSOR CIRCUIT MALFUNCTION



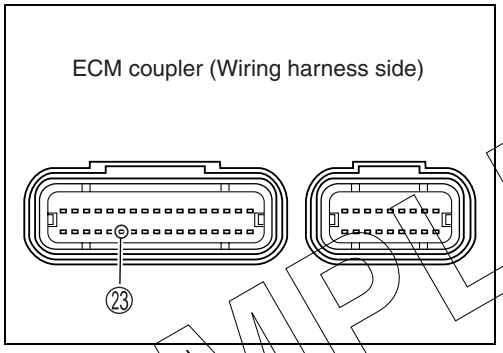
“C28” STV ACTUATOR CIRCUIT MALFUNCTION



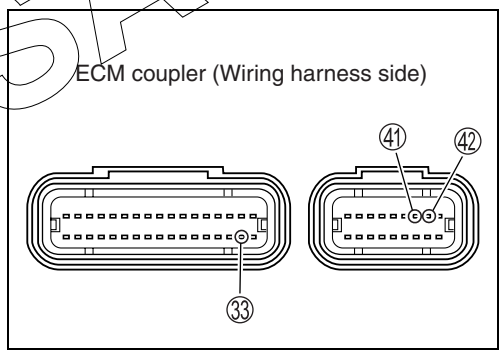
“C29” STP SENSOR CIRCUIT MALFUNCTION



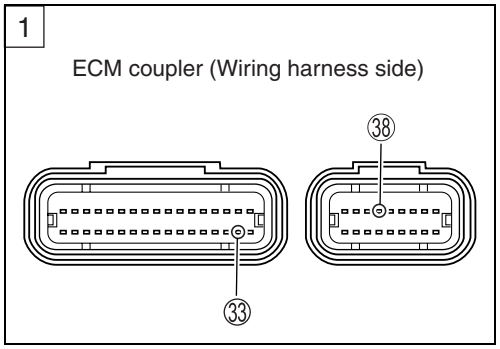
“C31” GEAR PSOTION (GP) SWITCH CIRCUIT MALFUNCTION



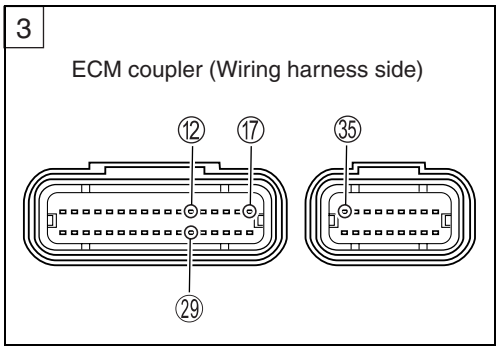
“C32” or “C33” FUEL INJECTOR CIRCUIT MALFUNCTION



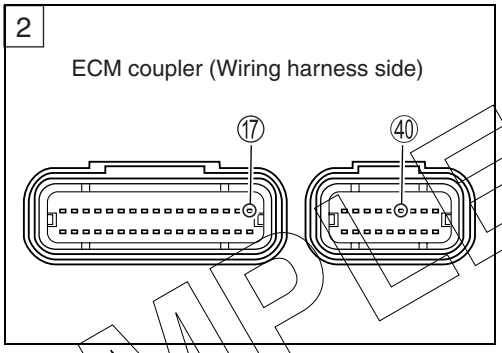
“C41” FP RELAY CIRCUIT MALFUNCTION



“C44” HO2 SENSOR (HO2S) CIRCUIT MALFUNCTION (For E-02, 19)



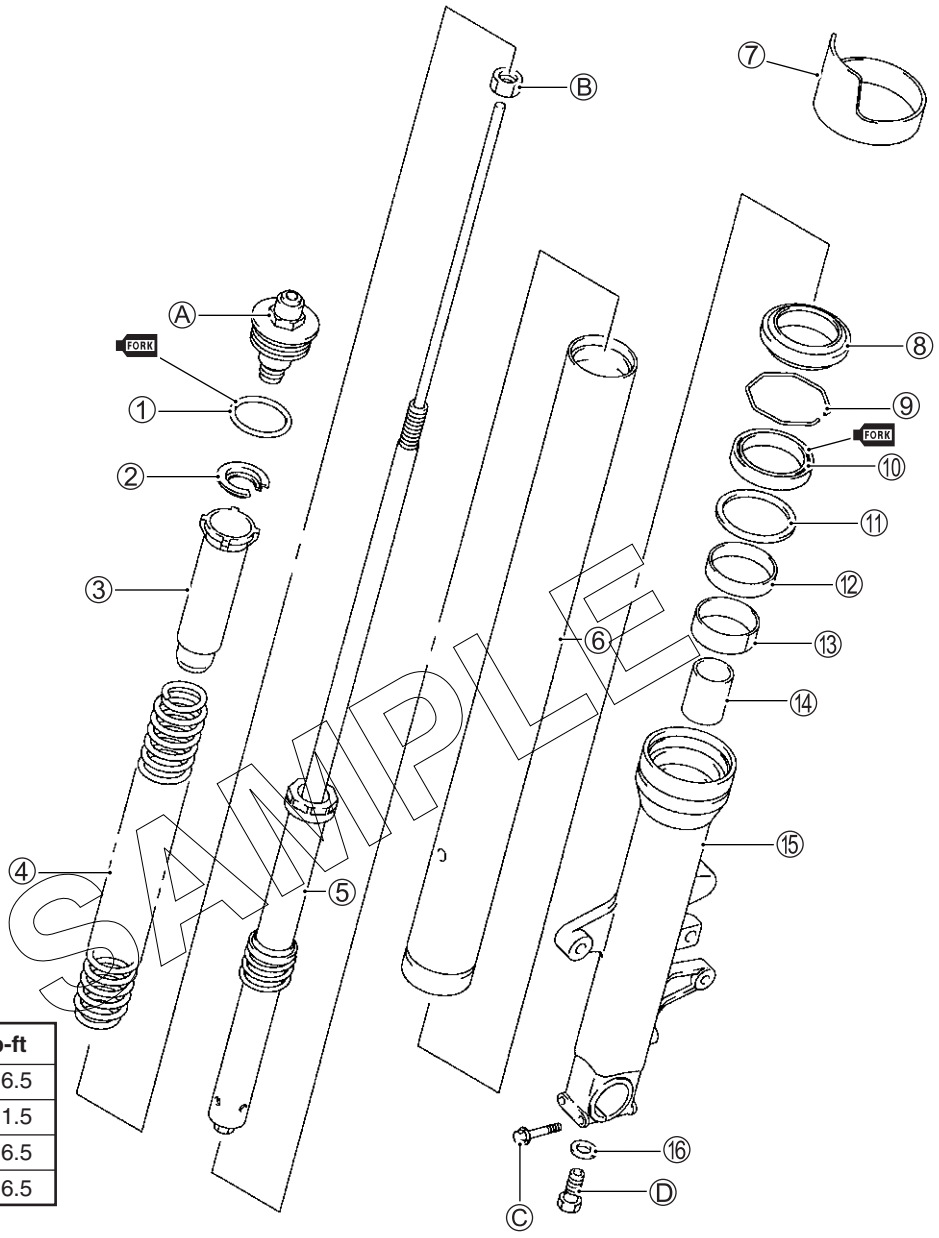
“C49” PAIR CONTROL SOLENOID VALVE



FRONT FORK (For SV1000SK5)

① O-ring
② Washer
③ Spacer
④ Spring
⑤ Inner rod/Damper rod (Cartridge)
⑥ Inner tube
⑦ Protector
⑧ Dust seal
⑨ Oil seal stopper ring
⑩ Oil seal
⑪ Oil seal retainer
⑫ Guide metal
⑬ Slide metal
⑭ Oil lock piece
⑮ Outer tube
⑯ Gasket

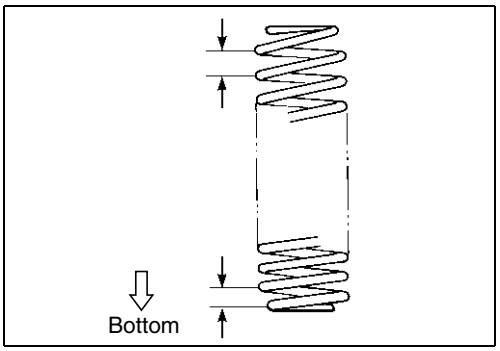
Ⓐ Front fork cap bolt
Ⓑ Inner rod lock nut
Ⓒ Front axle pinch bolt
Ⓓ Damper rod bolt



ITEM	N·m	kgf-m	lb-ft
Ⓐ	23	2.3	16.5
Ⓑ	15	1.5	11.5
Ⓒ	23	2.3	16.5
Ⓓ	23	2.3	16.5

FRONT FORK SPRING

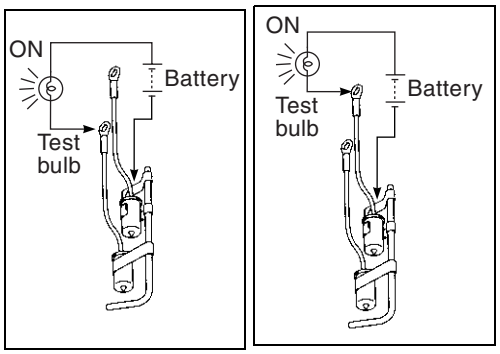
- When installing the front fork spring, the close pitch side to the bottom of the front fork.



FUEL LEVEL INDICATOR SWITCH INSPECTION

• Remove and disassemble the fuel pump assembly.

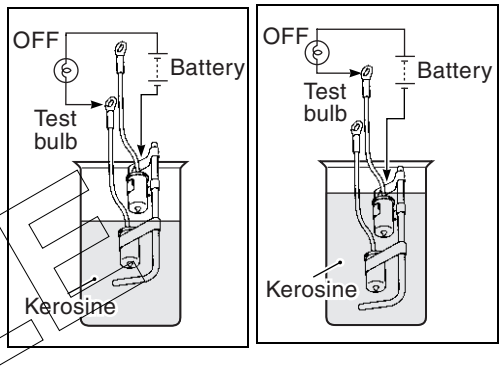
Connect 12 V battery and test bulb (12 V, 3.4 W) to the fuel level indicator switch as shown in the right illustrations. The bulb should come on after several seconds if the switch is in good condition.



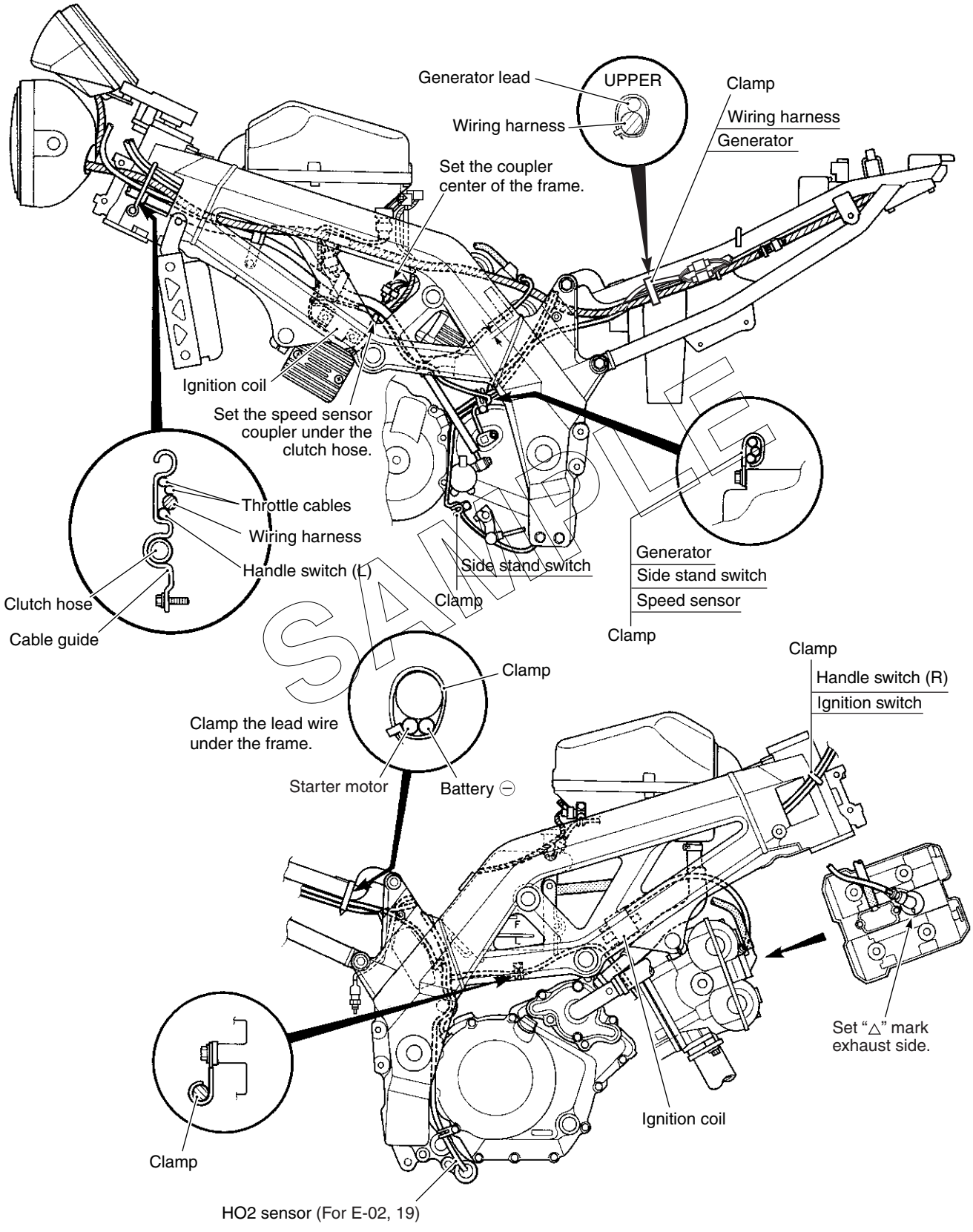
When the switch is immersed in kerosine under the above condition, the bulb should go out. If the bulb remains lit, replace the unit with a new one.

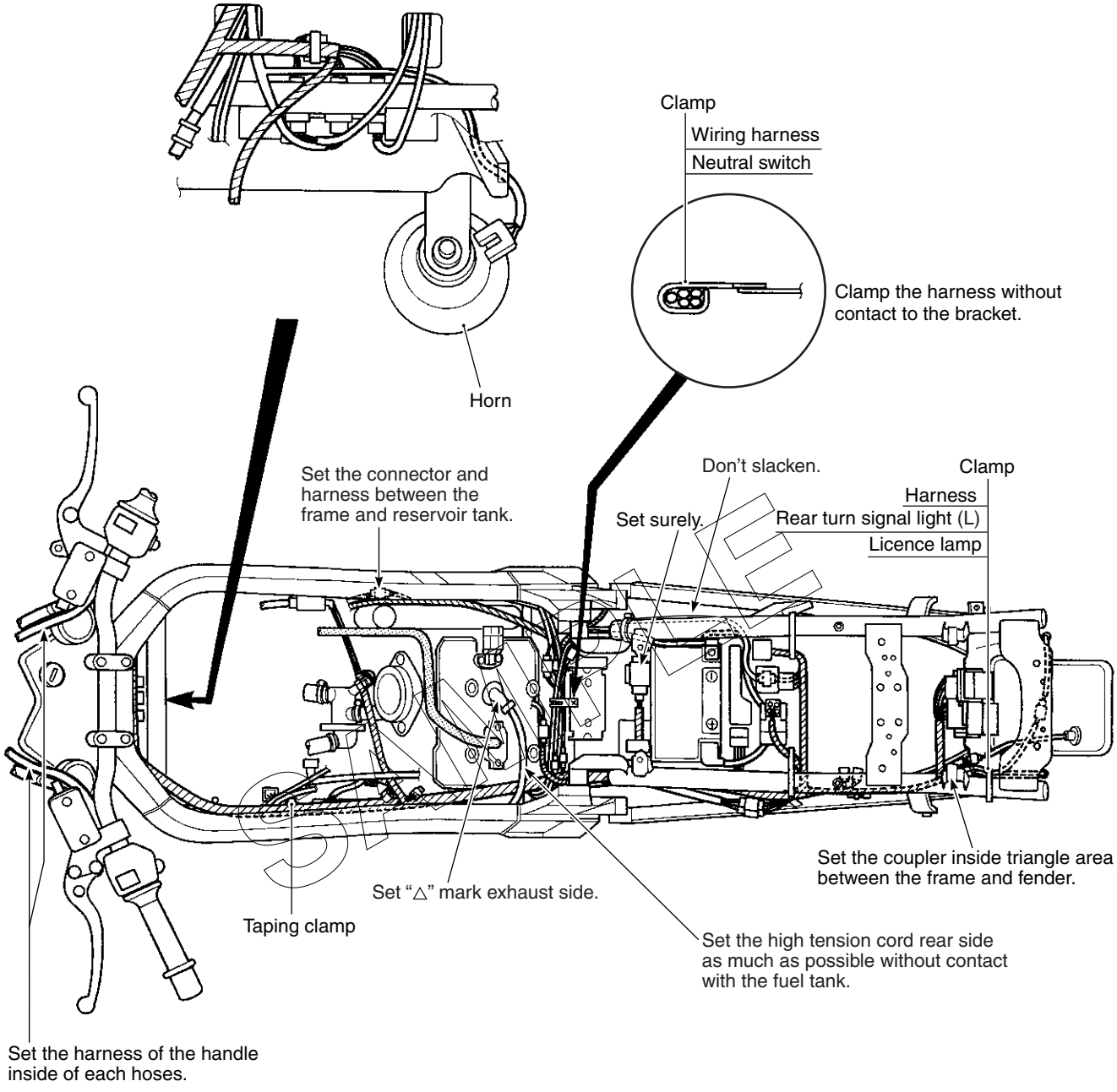
CAUTION

*** When the light turns off, immediately pick up the switch from kerosene.**
*** After the check has been completed, wash the switch with gasoline.**

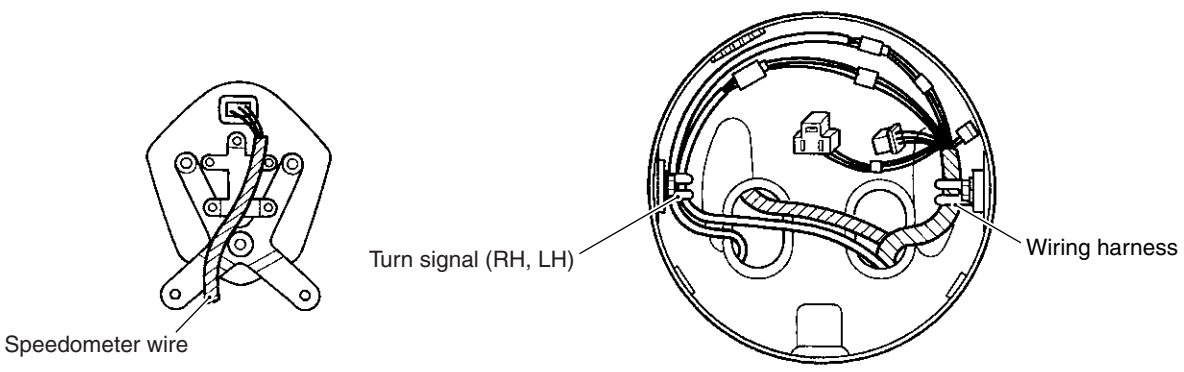


WIRING HARNESS ROUTING (For SV1000K5)

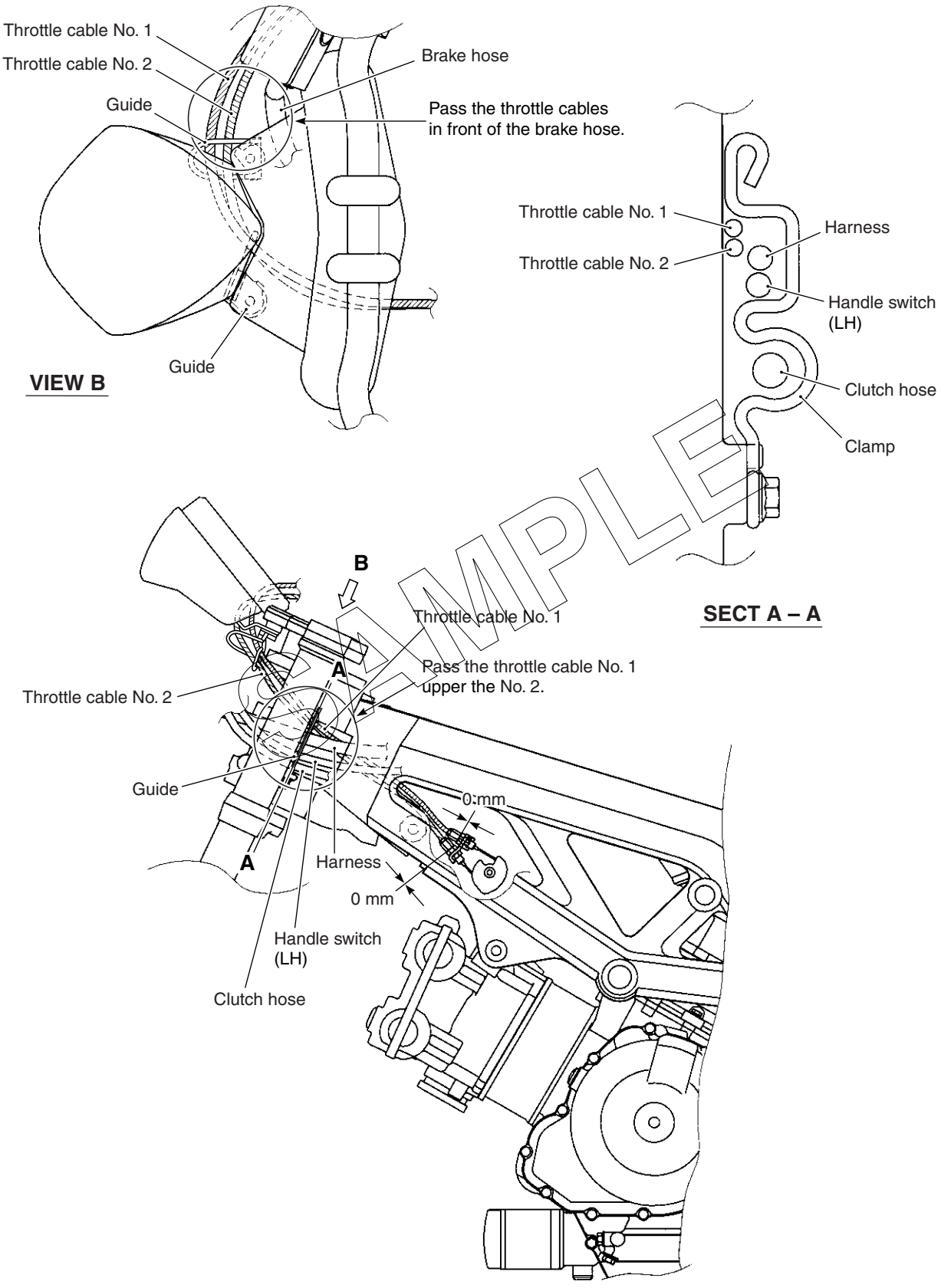




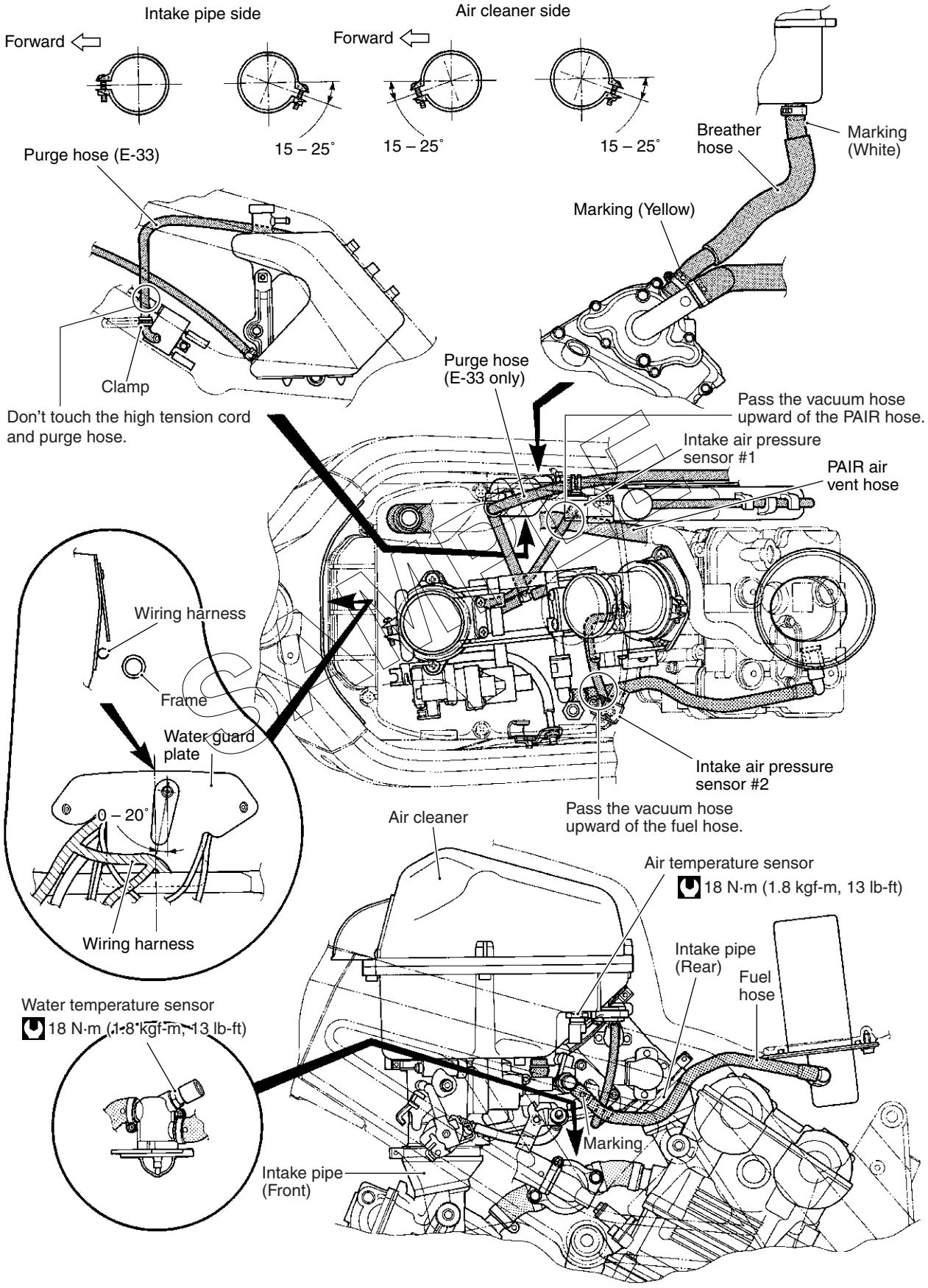
Inside of the head light



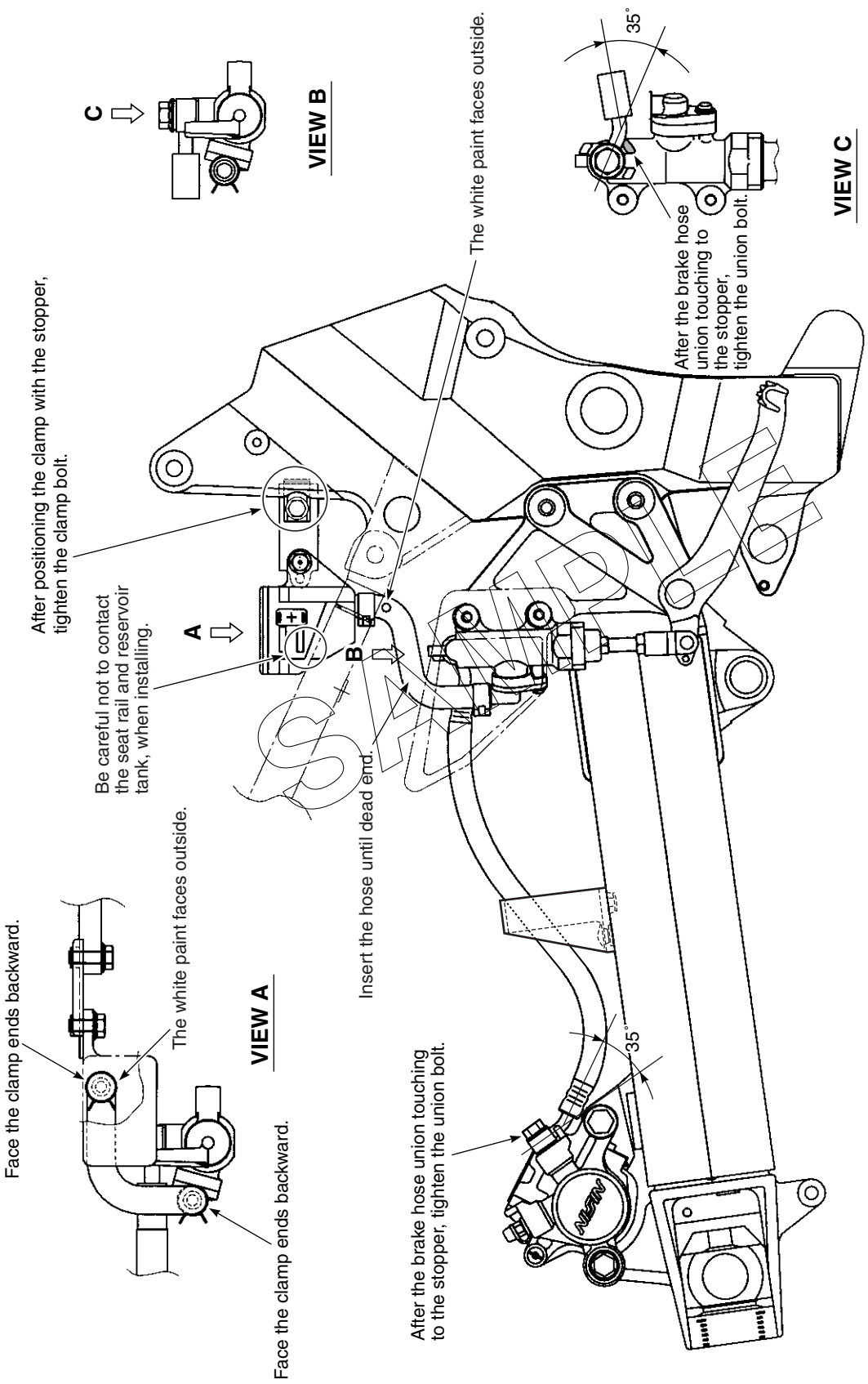
THROTTLE CABLE ROUTING (For SV1000K5)



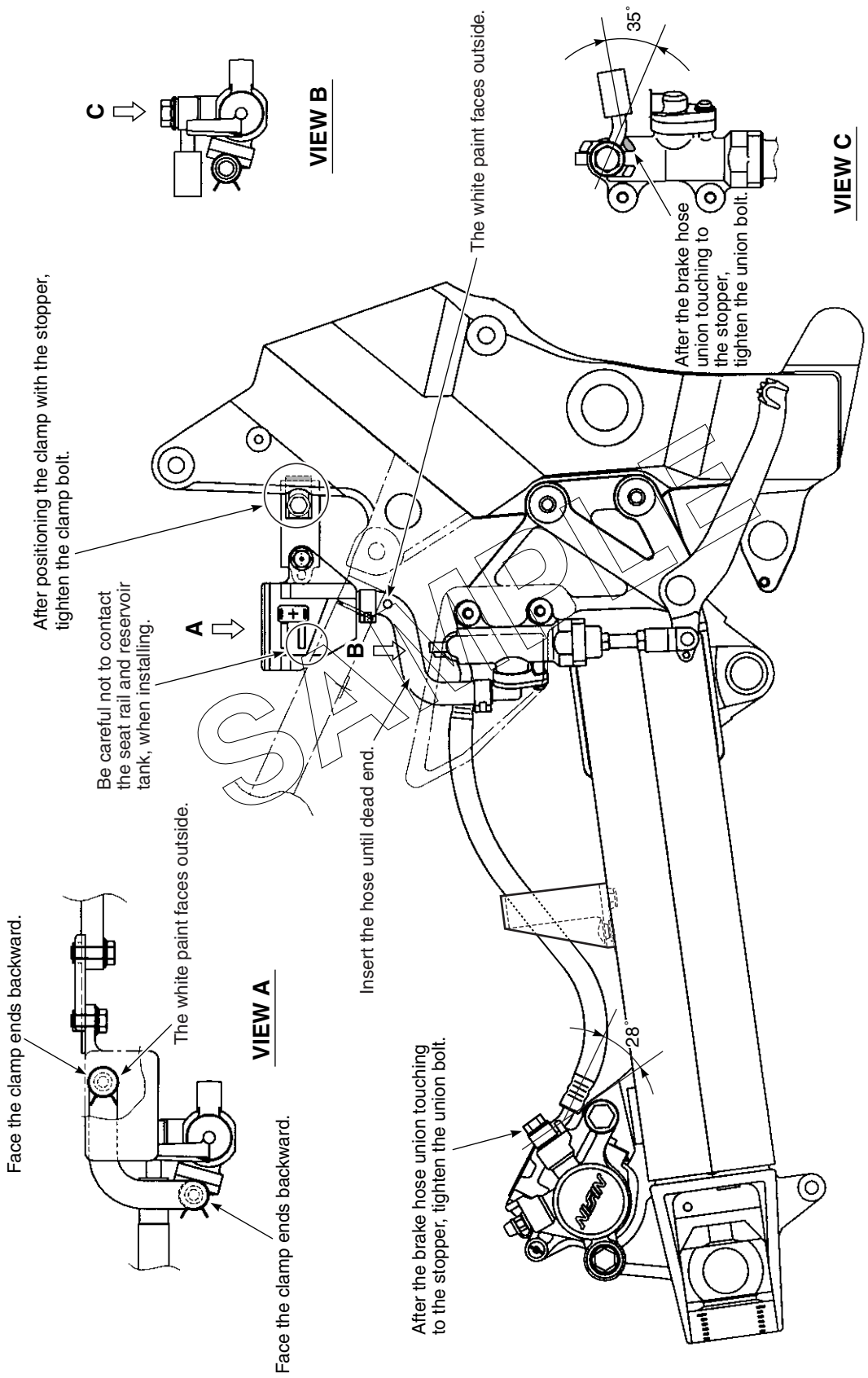
THROTTLE BODY INSTALLATION/HOSE ROUTING



REAR BRAKE HOSE ROUTING (For SV1000K5)



REAR BRAKE HOSE ROUTING (For SV1000SK5)



Prepared by

SUZUKI MOTOR CORPORATION

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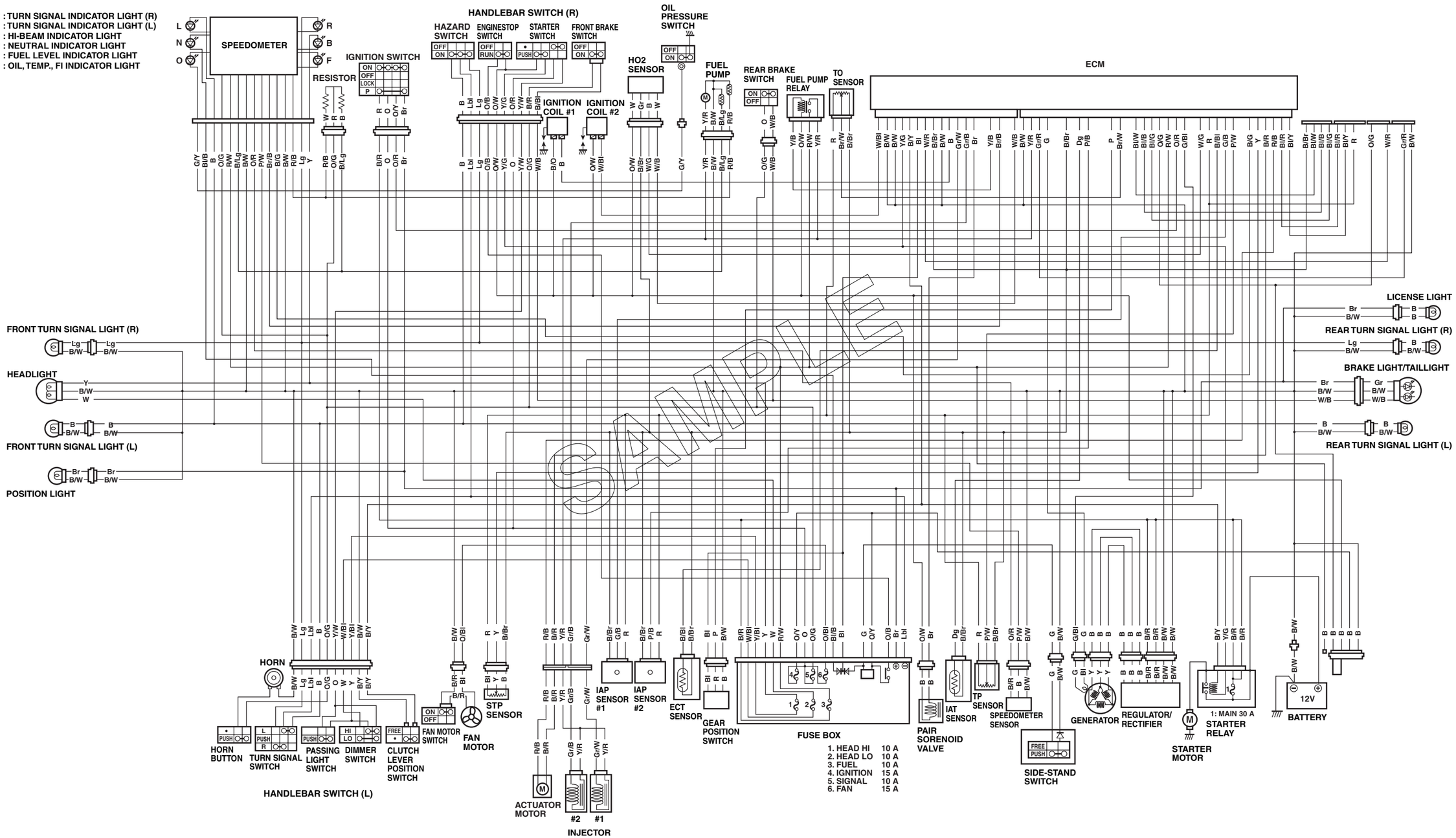
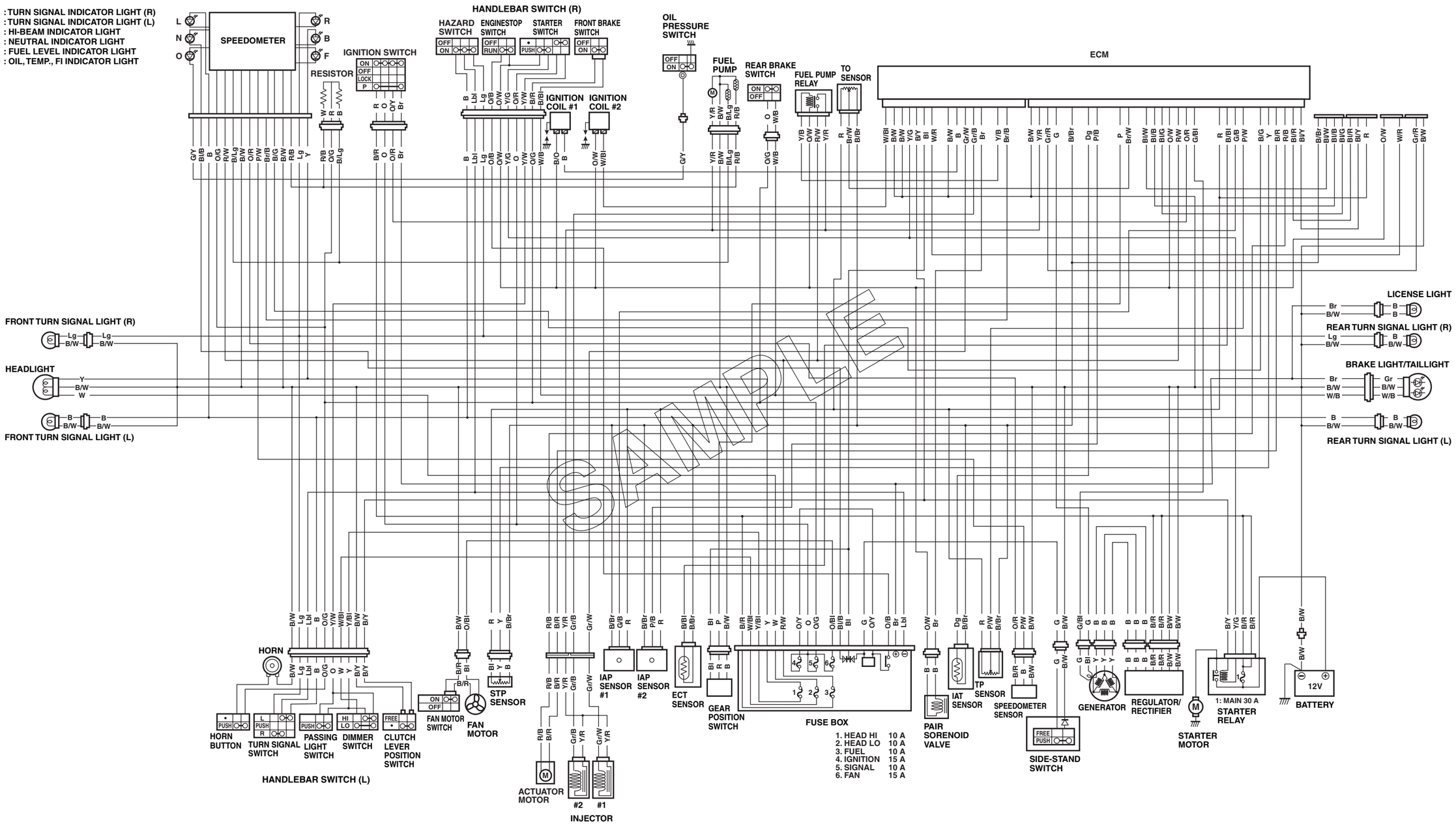
WIRING DIAGRAM
SV1000K5 (For E-02, 19)

R : TURN SIGNAL INDICATOR LIGHT (R)
L : TURN SIGNAL INDICATOR LIGHT (L)
B : HI-BEAM INDICATOR LIGHT
N : NEUTRAL INDICATOR LIGHT
F : FUEL LEVEL INDICATOR LIGHT
O : OIL, TEMP., FI INDICATOR LIGHT

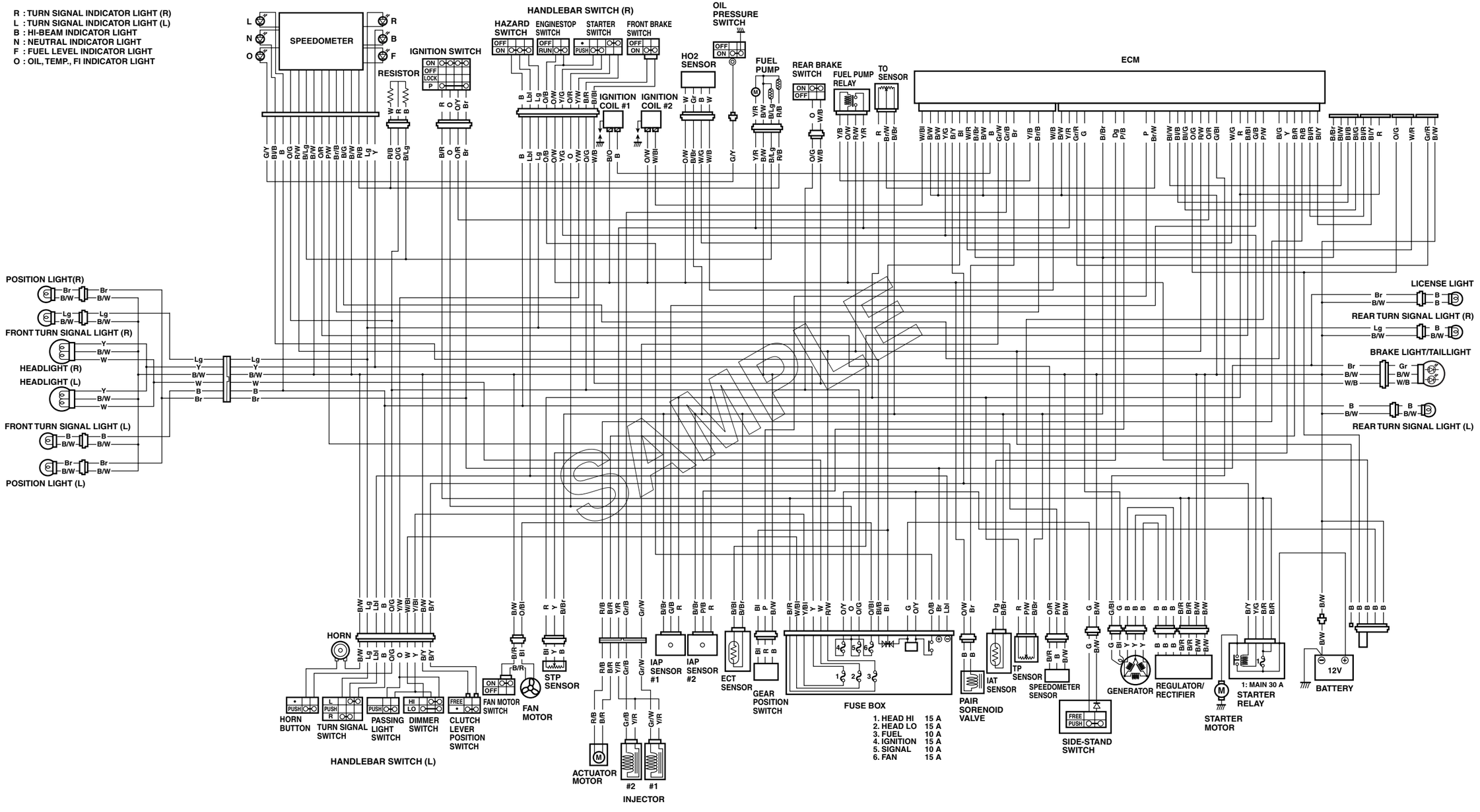


SV1000K5 (For E-24, 33)

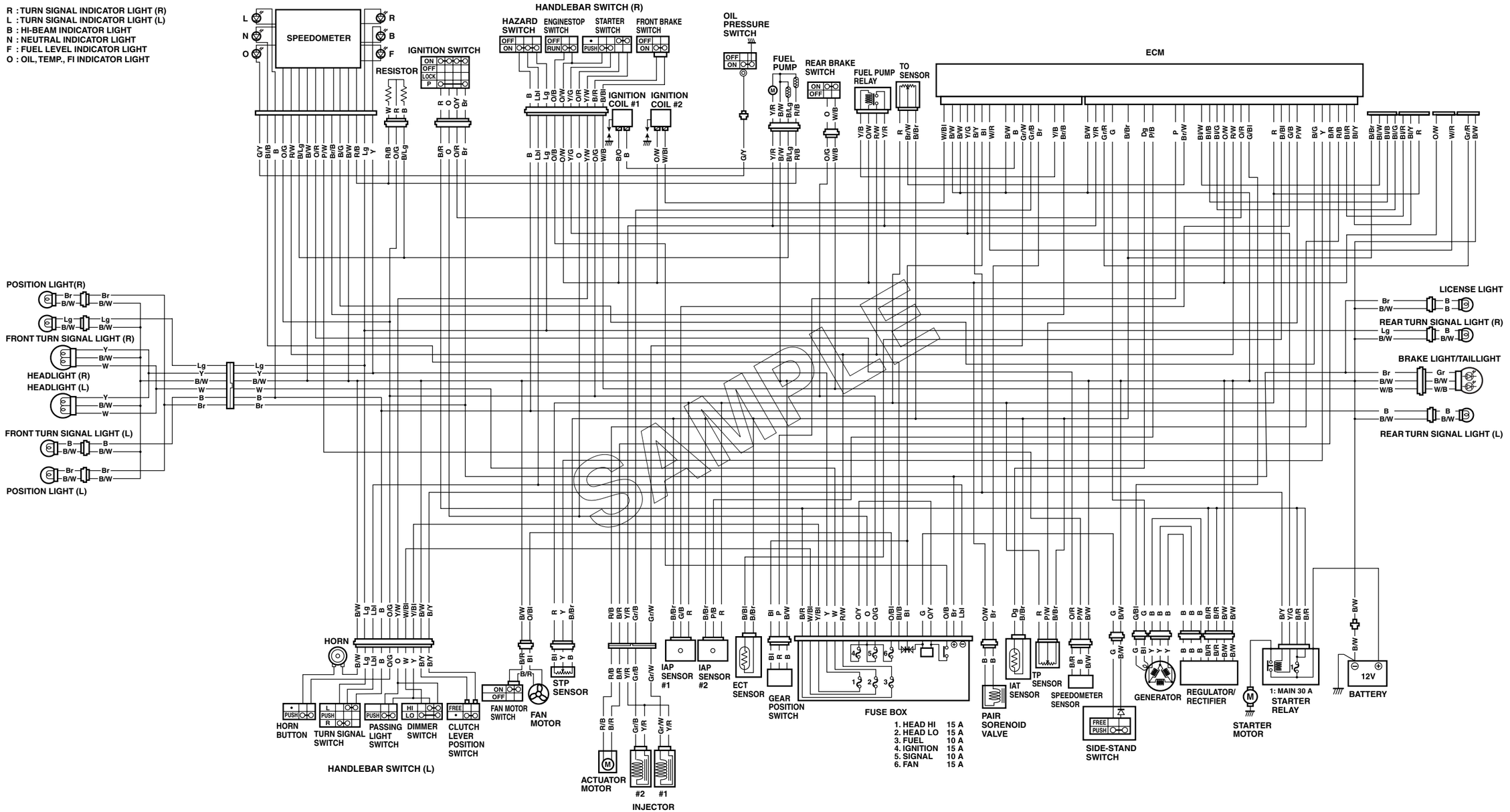
R : TURN SIGNAL INDICATOR LIGHT (R)
L : TURN SIGNAL INDICATOR LIGHT (L)
B : HI-BEAM INDICATOR LIGHT
N : NEUTRAL INDICATOR LIGHT
F : FUEL LEVEL INDICATOR LIGHT
O : OIL, TEMP., FI INDICATOR LIGHT



SV1000SK5 (For E-02, 19)



SV1000SK5 (For E-03, 24, 28, 33)



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